THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION

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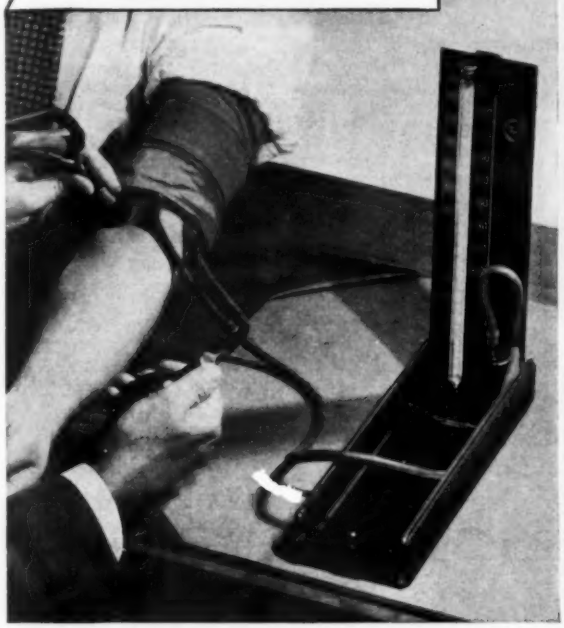

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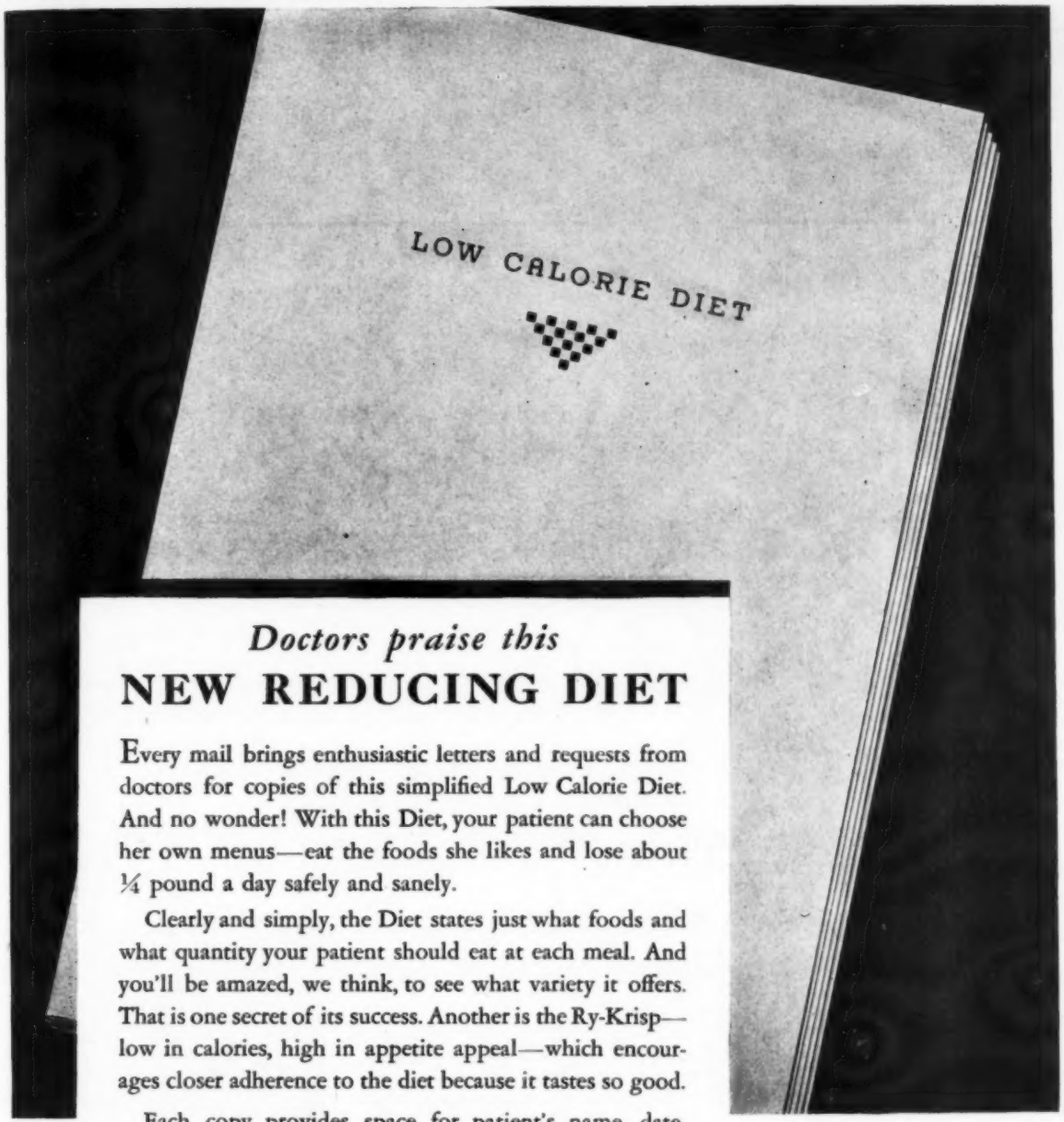

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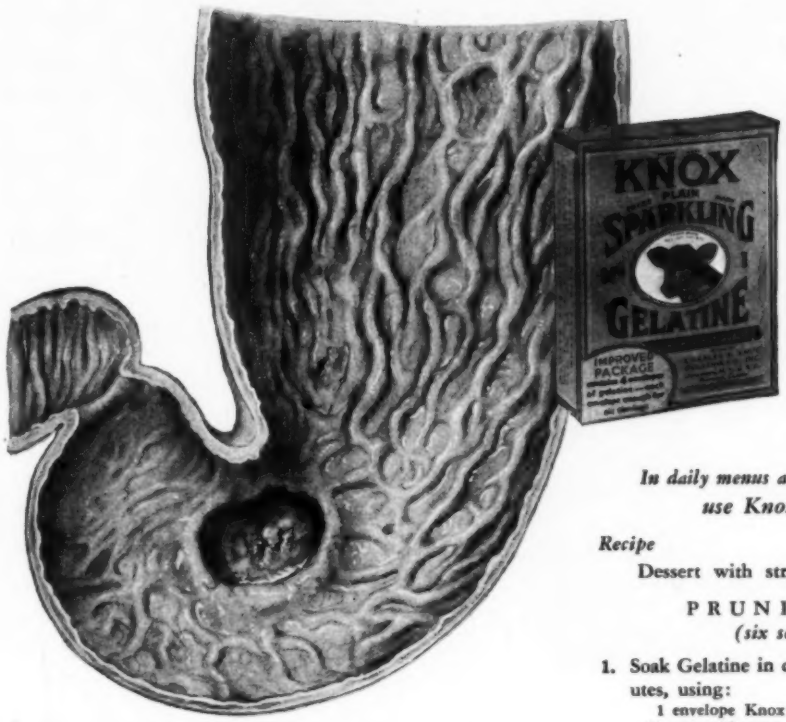

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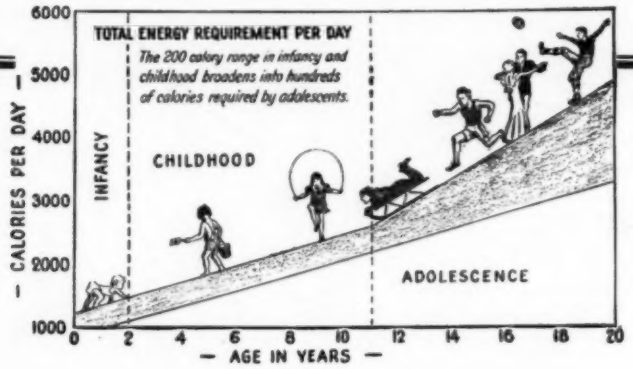

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Mechanical Interpretations of the Foot*

CARTER HARRISON DOWNING, M.D., D.O.
San Francisco

Evolution of the Foot.—The human foot has undergone many organic changes to meet the designing forces of evolutionary progression. Gravitational burden and the dynamic demands of terrestrial life have led to multiple and intricate alterations of skeletal units and pedal structures. Progressive organic adaptation has been a resultant of the varying conditions and demands met by our progenitors. Trophic reactions of the vital organism to environment are unceasing and compensatory physiologic accommodations—as they apply to body mechanics—are incessant.

Gravitational force is unremitting and the efforts of the body to meet it involve innumerable physiologic mechanisms and functions. Against this great factor of environmental stress the organism must present a continuous struggle. The osteopathic viewpoint is myopic if it fails to realize the full significance of this omnipresent force in the causal picture of the osteopathic lesion. Undoubtedly many mechanical perversions of the feet, or of body mechanics as a whole, are examples of failure to meet, by compensation, the elemental force of gravity. The recognition of this primary cause of structuro-physiologic lesions may easily go by default if we focalize too intently on a single mechanical perversion as a clinical entirety.

Closer apposition, and parallelism, of the legs have been essential to sustain and motivate body weight. In the human foot, divergent flexion and apposable rotation, on their long axes, between hallux and digits—as found in the anthropoid family—have disappeared largely and been replaced by convergent and parallel flexion of all digits. Axes of balance and leverage of the foot have become comparatively parallel. Adducted fixation, greatly added strength and size of the big toe, together with straightening of digits have brought about the traction of plantar flexors necessary to locomotion.

Elongation of the calcaneus contributes to anteroposterior balance and offers major support for body-weight. Character of the calcaneal formation has lent to the development of a transversely arched foot. As a part of an operating lever of Class 3 [power between fulcrum and weight], the os calcis is vitally concerned in the lifting and propelling of body-weight through the action of plantar and calcaneal flexors (calf muscles): interposed, it sharply defines the action of these two muscle groups. It allows plantigrade position of the foot, and ankle joint movement at approximate right angle to the leg. A decreased obliquity of the superior articular planes of the calcaneus and fusion with the shelf-like sustentaculum tali (vestigial second heel) have resulted in a more nearly horizontal support for the talus as contrasted with that in the anthropoid—in which a great obliquity of joint planes allows sharp, inward deflections of weight-thrust through the talus to the sustentaculum tali and hence to the first and second metatarsals for support and stability.

Development of the longitudinal arches has facilitated the distribution of the force of gravity and the prevention of propulsion. The architecture of bones and arrangement of their trabeculae give evidence of the effects of both compression and traction (Wolff's Law†). The medial border of the foot has arched progressively and the transverse tarsal arches have deepened. The lateral border of the foot has raised slightly with rotation of the cuboid on its tuberosity to form the lateral longitudinal arch. Intrinsic muscular development has decreased as need for structural rigidity (bony and ligamentous control) increased. This greater structural rigidity has given added capacity for weight-bearing; and heel modification with fixed adducted position of big toe has made the alignment of forefoot and hindfoot a firm balancing tripod and an effective functional lever for propulsion. This longitudinal division of the foot has resulted in two functional units: (1) a lateral longitudinal arch, which is largely weight-bearing, (2) a medial longitudinal arch mainly for propulsion.

Morton[1] points out that many individuals present a difference in the lengths of their first and second metatarsals, with the former definitely shorter than the latter. Possibly this is a morphologic defect. Normally, the first and second metatarsals are of equal length, but a variance of a centimeter in their lengths is not uncommon. During locomotion, this condition forces added leverage stress upon the second metatarsal head and, in certain cases, there may be found actual hypertrophy of this bone. Morton also notes instances where apparently the sesamoid bones are

*Delivered before the Foot Meeting at the Forty-First Annual Convention of the American Osteopathic Association, July 3, 1937.

†Wolff's law: Every change in the form and the function of a bone, or of its function alone, is followed by certain definite changes in its internal architecture and secondary alterations in its external conformation.

located too far behind the head of the metatarsal, or otherwise displaced in such a way as to provoke metatarsal disorder.

Arches of the Foot and Weight-Thrust.—The foot is constructed in a series of arches formed by the tarsal and metatarsal bones and, strengthened by ligaments and tendons, constitutes a firm triangular base of support. The bones are arranged in an elliptical arch supported by two pillars: a posterior or calcaneal, and an anterior or metatarsal.

The posterior calcaneal pillar receives approximately two-thirds of the weight-thrust. There are three components of distribution: the major one is directed at right angles through the posterior talocalcaneal facet; the second passes at right angles to the plane of the middle talocalcaneal facet; and the third, through the superior articulating surface of the sustentaculum tali.

The main arches are the anteroposteriors, which may be divided into two segments—a medial and a lateral. The *medial* segment or arch is made up of three metatarsal bones, three cuneiforms, the navicular, and the talus. Its summit is the superior articular surface of the talus. The *lateral* segment is made up of the fourth and fifth metatarsal bones, the cuboid, and the calcaneus. Both segments are supported posteriorly by the calcaneal pillar. The summit of the lateral segment is the talocalcaneal articulation—approximately one-third as high as that of the medial longitudinal arch.

There are two components of forward weight-thrust, of which the major is directed at right angles to the talocuboid facet, and as it passes forward, downward, and outward, it is met by a supplementary component at right angles to the articulating plane of the calcaneocuboid articulation. Their composite thrust is delivered through the heads of the lateral metatarsals. The minor component of weight-thrust may be represented by a line erected at a right angle to the talonavicular articulation—which line would continue forward, downward, and medialward through the heads of the medial metatarsal bones. Although there are two definite components of weight-thrust, there are actually six points of weight-bearing under the ball of the foot: namely, the two sesamoids under the great metatarsal and the heads of the four remaining metatarsals.

Both longitudinal arches are intimately related in function, although the medial—characterized by its great curvature and elasticity—is particularly concerned with locomotion, and the lateral—less curved and more rigid—is definitely concerned with static support. A fundamental longitudinal arch, capable of being maintained without the aid of the other structures of the foot, is sometimes described and consists of the calcaneus, cuboid, third cuneiform, and third metatarsal bones.

Morton[1] differentiates two specific axes of foot function: namely, an *axis of balance*, which operates in standing and is represented by a line drawn from the center of the heel through a midpoint between the proximal heads of the second and third metatarsal bones; and, an *axis of leverage*, which may be represented by a line drawn from the center of the heel through a midpoint between the proximal heads of the first and second metatarsals. In locomotion the directional line of movement of the foot is curved—carrying approximately along the line of balance to a midpoint of the foot and then curving inward toward the large toe (conjoint action of ankle joint and foot on oblique transverse axis).

Any factor or combination of factors which disrupts or deflects the line of weight-thrust through any one of these composite arches alters the mechanical influence of inexorable and continuous weight. Accordingly, continuity of structural and physiologic relations is disrupted from point of origin to point of termination. When the weight-bearing focus of the foot is altered, the center of gravity is displaced and this in turn definitely affects superimposed structures by purely mechanical action. As long as the foot balances the load perfectly—weight focused on the outer arch and joint-action free — distressing mechanical symptoms should not be anticipated.

Ligaments and Fasciae of the Foot.—The ligaments which unite the different bones are of two classes—special and general. The first type supports the individual joints while the second is employed in bracing or sustaining the arches generally. Grossly speaking, the ligaments of importance are the talocalcaneal, the talocalcaneo-navicular, the calcaneo-cuboid (long and short plantar), the cuboideonavicular, the cuneonavicular, the cuneocuboid, the intercuneiform, and the transverse metatarsal. The outer arch of the foot is particularly well trussed up by the long and short plantar ligaments. They assist in reinforcing the calcaneocuboid articulation which possesses a special mechanism for locking and allows only limited movement.

The talus slightly overlaps the calcaneus medially. Passing forward under the talus from the projecting shelf of the sustentaculum tali to the navicular is the inferior talonavicular ligament. The talonavicular articulation is peculiarly susceptible to weight-thrust, but is fortunately reinforced by the elastic calcaneonavicular ligament, which is able to respond quickly and restore the arch to its normal position under favorable conditions. It is, moreover, strengthened by the blending of this supporting band with the deltoid ligament medially and, inferiorly, with the tendon of the tibialis posterior which passes beneath the joint.

Under body-weight the foot naturally gravitates into a functional position of balance with tautening of ligamentous structures. The plantar ligaments and fasciae supplying both longitudinal arches are tautened simultaneously so the distal ends of the metatarsals bear their proportionate load. Abnormal relaxation of transverse ligaments may allow a spread of the transverse arch. When disparate tensions are present, the metatarsal heads subject to lessened tension fail to accept their proportionate load and those subject to excessive stress are held in abnormal fixity below the plane of their fellows (bowstring tension).

Abnormal contracture, tension or shortness of plantar ligaments and fasciae as a group causes slight tilting and unusual fixity of the metatarsal heads. An exaggerated impact of weight-thrust to metatarsal heads and continuous traumatic irritation may lead to inflammatory conditions. Arthritis, periostitis, cellulitis, painful corns and calluses or metatarsalgia may result. Locomotion is rigid with the toes drawn up in typical clawfoot fashion; ultimate shortening of the extensor tendons (digitorum and hallucis), compensatory

contractions in the bellies of anterior leg muscles, and shortening of the lateral phalangeal ligaments are often present. Partial atrophy may occur in muscles concerned in functional activity of the digits.

The metatarsals are commonly involved in lesions of the tarsal bones with which they articulate. The proximal end of the bone is elevated by a corresponding drop of the adjacent tarsal, and the metatarsal head is tilted forward, with an overriding of the phalanx articulating with it. The metatarsal head "drops" in a restricted sense only—rather, it loses its resiliency to impact of transmitted force. Few metatarsal troubles are primary. Widespread reflex irritation may radiate over the medial plantar nerve.

Metatarsalgia, or Morton's disease, is a painful condition due to pressure of nerve filaments between heads of the fourth and the fifth metatarsal bones. The head of the fifth, by lateral pressure, is forced against and below the neck of the fourth and results in impingement of the superficial branch of the external plantar nerve and its branches. The cuboid is usually implicated.

Muscles of the Foot.—For clinical consideration muscles of the foot can be classified as extrinsic or intrinsic. The extrinsic or leg muscles are the more active agents, the intrinsic muscles of the foot supplementing their action. The extrinsic muscles are divided into three groups: anterior, lateral, and posterior crural (superficial and deep). From their fixed points, these muscles serve to maintain the upright posture by steadying the tibia and fibia perpendicularly upon the talus. This is an essential adjustment to postural shifts, since the foot must be considered the fixed structure for the gravitational burden imposed. Postural stability depends upon the position of center-of-body weight in relation to the feet as basal structures. Lateral stability of the foot is maintained chiefly by muscle control of the ankle and substalal joints through coordinate function of tibial and digital flexors and peroneal muscles.

Postural stability in the anteroposterior plane is maintained by the calf muscles, against the force of gravity which falls in front of the ankle joint, augmented by tonicity of anterior musculature. Although for a time the muscles of the leg may sustain a position of the foot in defiance of the law of gravity, these muscles cannot continue to do so indefinitely without penalty. There are, however, several accommodations which, under normal conditions, may allow the center-of-body weight to be shifted to marginal lines of structural support without strain. Proper foot balance is dependent upon tone coordination of all muscular structures and any disrupted muscle equilibrium is an immediate source of disturbed structural and physiological integrity.

The tendons of the anterior group (composed of the tibialis anterior, extensor proprius hallucis, extensor longus digitorum, and peroneous tertius) pass down over the ankle where they are held in position by the crural ligaments, thickened bands of fasciae. These bands allow definite pull for the tendons along the straight axis of the foot. The tendon of the tibialis anterior is the largest: it inserts into the internal cuneiform and the base of the first metatarsal. Abnormal tension of this tendon is a mechanical stress upon the internal cuneiform and the first metatarsal segment. All muscles of this group dorsiflex the foot: two evert the foot; and two are digital extensors. Eversion at Chopart's joint (talonavicular-calcaneocuboid) entails composite action of the peroneal and the extensor digitorum longus muscles.

The peroneus longus and brevis make up the lateral musculature of the leg and extend and evert the foot. Eversion of the foot in subtalal joints is aided by the tibialis anterior and extensor hallucis longus. The tendons of the peroneus longus and the flexor longus digitorum are so arranged that they pull obliquely upon the bones of the foot to crowd them together and consolidate them transversely. The tendon of the peroneus longus assists in security of support of the cuboid (inferiorly) and the anchorage of the base of the first metatarsal (transversely).

The superficial posterior group consists of the gastrocnemius, soleus, and plantaris muscles. They extend the foot and flex the leg—attaching through the tendon of Achilles into the calcaneus. Shortening of this group is not uncommon. This condition may be congenital or acquired and is frequently seen in pes cavus. Dorsiflexion of the foot should normally carry to approximately 10 degrees beyond a right angle. Shortening does not allow the heel to drop to a proper degree in standing.

In locomotion, if the heel remains on the ground as the long bones approach the perpendicular, abnormal tension of these muscles causes (1) an exaggerated conduction of force downward through the long axis of the leg bones and talus, which piston-like compression causes excessive tension of plantar structures (ligaments, fasciae, and muscles of longitudinal arches) and (2) an outward torsion or rotation of the foot to avoid acceptance of this strain, by deflecting it through the medial longitudinal arch. The metatarsal heads are apt to be unusually rigid. One acquired cause of this disorder may be the continued use of high heels, which contribute to gradual shortening of posterior musculature. Height of average heel should not exceed one and one-half inches—otherwise the foot is held in a position of leverage with weight-thrust deflected forward and inward. Persistent use of very high heels places an added burden on the entire metatarsal arch but disproportionately more on the first metatarsal. Posterior muscle shortening may be produced by overdevelopment of calf muscles with consolidation, or by long-continued disuse with contracture.

The deep posterior musculature consists of the popliteus, the flexor digitorum longus, the flexor hallucis longus, and the tibialis posterior. Tendons of the three last named pass down behind the internal malleolus in a special compartment, confined by a strong band of fascia. Together with the tibialis anterior and the extensor hallucis longus, these invert the foot at Chopart's joint. At the subtalal articulations, the gastrocnemius and soleus assist in inverting the foot. Disrupted muscle equilibrium is to be suspected in the presence of habitual everted ankle with pronation, or inverted ankle with supination. Coordinate muscle balance of the feet in standing is such that these basal structures should be able to sustain the body in an upright position (postural stability) with a minimum of muscle exertion. These same muscular activities should permit a maximum efficiency in locomotion.

Stance and Locomotion.—Postural security must be considered in relation to the habitual position of

the bones of the lower leg and of the feet in standing. Inversion or eversion of the feet cannot be considered in the main correct. The individual who habitually stands toeing in does so at the sacrifice of lateral equilibrium, and with a more or less exaggerated weight-thrust upon the lateral (weight-bearing) arches of the feet. One who habitually stands with the feet excessively outflared may offer greater triangular balance for lateral equilibrium but does so at the expense of added weight-thrust upon the medial longitudinal arches. The supportive and leverage functions of muscles and ligaments must also be considered in relation to the position and alignment of the bony structures to which they are attached.

In locomotion, the pull of gravity against a continuous imbalance of body-weight necessitates propulsive muscular effort. This action against the center of body-weight must establish—within a time limit—a new base of support. The greater the degree of imbalance of center of body weight, the greater the speed and amount of movement required to reestablish equilibrium. Inasmuch as locomotion demands continuous action in a forward line of movement, there is decreased necessity for lateral balance. Therefore, in locomotion the amount of separation and angle of outflare of the feet is proportionately less than that shown in standing.

Pes Planus.—Functions of the talus are dual. As a part of the ankle joint, it permits flexion and extension between itself and the long bones of the leg but, normally, no side movement. Through the subtalal articulations, it allows lateral movement of the foot. In conjunction with the calcaneus it is a key structure in proper structural integrity for physiologic or postural stability of the hind foot. The articular portion of the talus offers the shortest cross diameter when in normal position and any torsional action of the talus tends to separate and lower the malleoli by a kind of pry action between the spatulate extremities of the tibia and the fibula. This condition may result from weight; from repeated strains of the ankle joint, or from long and continued strain where the long axis of the foot is habitually deflected in relation to the long axis of the leg. Weakening of the anchorage of the ankle joint with abnormal lateral excursion, occasional swelling and a measuremental increase in the interspacing of the malleoli are the usual findings.

During locomotion, the heel is the point of primary impact and a displaced striking-point can cause a misdirection of the entire foot. In pes planus there is eversion of the tuberosity of the calcaneus, with the striking-point displaced toward the medial tubercle.

Deflected static force of superimposed body-weight, passing through the vertical plane and acting in the manner of a fulcrum, everts and pries the tuberosity of the calcaneus laterally to the perpendicular plane in which it is normally carried. As the mesial border of the foot pronates, the articular planes of the talus become slightly oblique. The head of the bone dips downward and inward. Movement of the head of the talus is more discernible, as the head is less restricted and describes the greater range of motion. Exaggerated strain is placed upon the inferior calcaneonavicular ligament. The security of the anchorage of the talus between the malleoli is weakened and there is a tendency to undue laxity of the ankle joint. This danger is somewhat reduced by the short, broad, strong ligaments of the ankle joint (no musculature).

The navicular rotates about the head of the talus on an anteroposterior axis. Due to spreading of the arch and gapping of the articulations, the bone undergoes a certain amount of arthrodial slippage, medialward and downward. It acts more or less as a ball bearing mechanism between two revolving levers—the hind foot and the forefoot—with opposite directions of rotation operating in such manner as to cause its tuberosity (medial) to rotate upward as the lateral portion of its body rotates downward. The action of the navicular is influenced by the pull of the tibialis posterior muscle.

The internal cuneiform—a consistent offender in flat foot—is put under a gapping strain and is displaced downward and medialward. Due to buckling and torsional strains at Chopart's joint, the medial border of the cuboid becomes ptosed, pivoting somewhat on its tubercle and also carrying downward the external cuneiform. The middle cuneiform is directly affected by involvement of either the internal or external cuneiform. The general effect is such as to produce a flattened transverse arch which, in turn, creates more distal mechanical anomalies of like order. Morton[1] has observed pronated feet in which the first metatarsal segment shows hypermobility. He believes this condition, whether inherited or acquired, develops early in life. It is characterized by slackening of plantar ligaments and secondary strain on muscular structures of the inner side of the foot and ankle. Involvement of the internal cuneiform induces hypermobility, and metatarsalgia develops from excessive weight being thrust upon the second metatarsal.

Hallux valgus may result from abnormal leverage of confirmed pronation—which tends toward muscle imbalance and to force the large toe laterally. With its spatulate malleolar extremity forced outward by the torsional action of the talus the fibula may rotate slightly upon its long axis.

Pes Cavus.—No other type of foot pathology gives rise to more traumatic irritation than pes cavus because of its rigidity. A diffuse plantar cellulitis is the common end result. An inflammatory condition may involve articular, ligamentous, fascial, muscular, or nervous structures. A broken arch is not necessarily implied in this well-established clinical entity. The deformity may be slight or negligible. There is usually exaggeration of the longitudinal arches with fixity of the metatarsal heads. Digital flexion is limited.

In pes cavus, even of moderate degree, the patient may suffer severely. In the strong person with high longitudinal arches and everted ankles, torsional stress and great mechanical thrust in locomotion maintain the arch under marked strain and tension. The arches become acutely rigid, stiff and painful. It is essential that we differentiate between cases where there is shortening of the Achilles tendon and those in which the pes cavus is a primary plantar disorder.

Pes cavus may occur with either varus or valgus ankles; again, it may be found with apparently normal ankle relations. The inverted type is often a sequel to ankle sprains in which external lateral ligaments have been weakened. Since the perpendicular line of body-weight tends to pass laterally to its normal

position, these patients usually suffer greater distress in standing than in locomotion. Frequently they toe in to an exaggerated degree and their shoes run over badly on the outer side. While the abducted foot with high arch is ordinarily seen in the strong individual, it may appear in long slender feet. This type of arch disorder is exceptionally painful as the condition is maintained under terrific tension.

In pes cavus with inverted ankles, inversion of the tuberosity of the calcaneus is apparent and the striking point is deflected toward the lateral tubercle. This acts as a pry to produce gapping strain and force the cuboid (medial border) to assume a ptosed position in the lateral arch. Excessive static strain on the calcaneocuboid articulation is the natural sequel to the position assumed, since the lateral arch receives at an oblique angle more than its usual burden. The entire outer arch is weakened. The fourth and fifth metatarsal heads bear more than their proportionate load. The talus is forced to assume a lateral and slightly rotated position. The fibula, with its spatulate malleolar extremity, is apt to rotate on its long axis because of torsional compensation. The mechanical effect of the long plantar ligaments and fasciae should not be lost sight of in pes cavus. Their bowstring tension upon the metatarsal arch is a common cause of metatarsal disorder.

Postural Equilibrium and Pedal Balance.—The assumption of bipedism has created both functional and structural changes in the organism. Skeletal development in segmental construction and physiological adjustments in man have resulted in more effective and more nearly vertical transmission of body-weight. In normal posture or standing, equilibrium is sustained with a minimum of energy output and this integral stability of body-balance in the presence of gravity is accomplished by structural arrangements and positions, action of ligamentous supports, and dynamic equilibrium in muscular tonicities. Since beings vary in structural design, and absolute structural symmetries and physiologic balances in any one body do not exist in paired structures, these morphologic and physiologic variations fuse and resolve themselves into characteristic postural behaviors that are distinctly individual.

Balance is a dynamic response to gravity. The living individual is constantly overcoming inclinations induced by gravity by assuming the positions of balance. The sense of equilibrium is automatic and instinctive. Balance must be maintained both in locomotion and in standing, as the center of gravity of the human body is never fixed. When the bones are in motion, their position is controlled largely by muscles; while at rest, the bones are controlled by ligaments and muscle tonicity. Whether in a state of motion or of rest the superincumbent weight is constant although subject to rapid shifts. Continuous adjustment to a constantly changing line of gravity is necessary—otherwise, the nicety of coordinate action of balance and equilibrium is lost.

Standing, the feet are the primary bases of support and the organs of weight reception. Their manner of acceptance of the elemental load is an imperative consideration in the analysis of mechanical perversions of the feet. Body and pedal balance are intimately related so malreception of weight by the feet must be considered the prime source of pedal dysfunctions and disorders. This being incontrovertible we must acknowledge the need for a means of ascertaining accurate measurements of the dynamic weight-bearing functions of the foot and, further, of being able to classify these findings as normal or abnormal.

Using the orthopedic indicator — Posturchek[2]— studies of weight-distribution to feet in standing have been made on some two thousand cases. There is a wide range of variance between individual stances. The instrument used provides two movable platforms adjustable to the habitual stance of anyone. Separation between the feet depends to a great extent upon the height and size of the person. The average outflare is about twenty-five degrees. This is not constant —some individuals may demonstrate an actual inflare of feet in standing.

Each of the platforms of the Posturchek is divided into four segments which register on separate weight indicators. Three plates are used for study of weight-reception under the metatarsal arch (metatarsal heads) and one plate for registration of heel-thrust. Tests have been made with and without shoes. In standing an approximate 60 per cent of weight-load is carried by the heel—though it may go as low as 50 per cent in apparently normal adult feet. This leaves 40 to 50 per cent to be carried by the metatarsal heads. The medial longitudinal arch in standing accepts through the head of the first metatarsal, through its double contacts (sesamoids), and to a lesser degree the second metatarsal head, about 10 to 15 of an approximate 40 per cent of total weight-thrust. The lateral arch accepts through the heads of the third, fourth, and fifth metatarsals, an approximate 25 to 30 per cent. Therefore, the ratio here can be estimated between 2 to 1 and 3 to 1. In normal adult feet the second metatarsal has been found to assume very little weight-thrust.

Since the arches are not present at birth but develop solely through locomotion, their gradual maturity is accompanied by progressive changes from weight-bearing. Children with flexible posterior musculature and immature arches may carry as much as 70 per cent of body-weight on the heel and the forefoot receives 30 per cent. As between the medial and lateral sections (metatarsals), the ratios of weight-bearing may vary from 2 to 1 to 1 to 1.

Anteroposterior Equilibrium.—In anteroposterior equilibrium a vertical line passing through the center of gravity of the body must fall within its base of support, and maximum stability is assured if it falls midway between the anterior and posterior pillars of the foot. This point is the talonavicular joint, which is the highest level on the arch immediately in front of the ankle joint from which the weight is deflected to the heads of the metatarsals and calcaneus—anteriorly and posteriorly, respectively.

In normal posture, the center line of gravity falls slightly in front of the center of motion of the ankle and the knee joint and slightly behind the center of motion of the hip. Hyperextension of the hip joint is prevented by the iliofemoral ligament; hyperextension of the knee by the posterior, lateral, and crucial ligaments. Muscular effort is required of the posterior cervical musculature to hold the head erect as the greater weight of the head is anterior to the condyles

and the musculature of the back of the legs must contract slightly to prevent dorsiflexion of the ankle.

A disturbance in anteroposterior equilibrium in which the gravitational burden is deflected anteriorly is commonly found in lordosis; also in shortening of posterior musculature (Achilles group) and in pes cavus. It may accompany abdominal obesity or faulty postural attitudes. Often this condition is artificially induced by postural shift due to the use of faulty shoes (excessively high heel with small base plane). Remedial heels are essential to proper shoeing. Where there is need to change postural balance a transverse bridging of 1/16 inch, built across the anterior portion of the heel, will deflect body-weight posteriorly. Where the calf muscles are shortened and too much weight is thrown forward, the judicious use of the heel is an important factor in treatment. Lowered heels allow active use and stretching of these muscles and, if necessary, may be interchanged with those which afford the best physiologic accommodation to the disorder. The former serve to exercise the muscles whereas the latter accommodate the condition. To women addicted to the use of absurdly high heels nothing beyond good advice can be offered while they persist in the bad habit. Lowered heels with larger base planes are unquestionably indicated. From studies made of pedal weight-bearing it has been found that 1½ inches in heel height is the limit that will preserve anteroposterior foot balance.

Lateral Equilibrium.—The center line of gravity falls midway between the ankles of the two feet in lateral equilibrium. The fact that there are two points of support assures increased stability. In standing, the weight is transmitted from the promontory of the sacrum to the femorosacral arches with some deflection through the posterior sacroiliac ligaments to the hip joint. It then passes downward through the long bones of the legs to the talus.

A disturbance in lateral equilibrium appears in any condition or group of conditions that disrupts paired structural or physiologic relations between the integral halves of the body. The most common is anatomical short leg. Since the spine is a curved and segmented rod, a lateral deflection of equilibrium is accompanied by rotary accommodation or torsion.

Where anteroposterior curves are most marked (lordotic or kyphotic spine), there is the greatest degree or amount of torsional accommodation with displaced lateral equilibrium. Correction of base planes in shoeing must take into consideration both of these factors. Correction of lateral equilibrium alone may be insufficient to correct postural and pedal balance. In the event of short leg, a single total lift is employed to the point of establishing a bilaterally equalized weight-load. The additional use of wedges may be needed to take care of torsional imbalance.

In the instance of anatomical short leg we often find an apparently pronated flat foot on the side of the long leg with a medially deflected weight-load and a tendency to pes cavus with a laterally deflected weight-thrust on the short-leg side. This is but one of the many examples of complex pedal imbalance and postural misbehavior which may be encountered. If there is much torsional disturbance, correction may require not only a single total lift on the short side but an inside wedge in the heel on the long side as well. The lateral side wedge may be a very important corrective feature in altering base planes where there is marked pes cavus. Variations of postural and pedal imbalance are innumerable and in some cases balance may be achieved only by combined alteration of base planes to accommodate disturbance in all equilibriums —that is, anteroposterior, lateral, and torsional.

I am convinced our great osteopathic mistake is still our failure to more fully envisage *cause* as well as *effect*. The foot is marvelously adaptive and tremendously resilient; nonetheless, a constant deflection of gravity load can impose such inexorable strain upon this member that it *can* fail.

693 Sutter St.

REFERENCES

1. Morton, Dudley J.: The Human Foot. Columbia University Press, Morningside Heights, New York, 1935.

2. Posturchek: Formerly called Robalin. See "The Orthodynamics of Posture" by Carter Harrison Downing, Jour. Am. Osteo. Assn., 1936 (May), 35:405-418.

Downing, Carter Harrison: Osteopathic Principles of Disease. Ricardo J. Orozco, Hooper Printing Co., San Francisco, 1935.

Shoes as Base Planes*

MR. C. A. ROBERTS
San Francisco

The Foot Section of the American Osteopathic Association has had presented to it a great many discussions of the various types of footwear and the particular use to which each might be put. The topic "Shoes as Base Planes" may seem a rather simple subject for discussion. However, it is hoped that it will prove to be of vital importance and worth a great deal of consideration. Without reference to any particular construction or brand, shoes will be discussed as weight-reception units.

The geometrical definition of *base* is "The line or surface constituting that part of a figure on which it is supposed to stand." *Plane* as used in connection with base planes corresponds to the internal and external superficial areas or surfaces of the shoe.

The history of the development of shoes is interesting. In the beginning, protection was perhaps the great motivating force which prompted man to devise a covering for the feet. Through the various stages of civilization, shoes have served both useful and ornamental purposes, and it can be said that definite and steady progress has been made in the contouring of lasts so that shoes might better follow the outlines of the normal foot. In this connection, it is important that the manufacturers and the persons who are developing lasts be given proper credit because this procedure is very tedious and most expensive.

At present, as in the past, many shoes are used for an entirely different purpose from that for which they were designed. In other words, we find style and pride a constant threat to the well-being of the human foot. This menace is so great that we now find more than 85 per cent of all adults with foot trouble. However, not all of these cases were caused entirely by improper footwear. It is safe to say that whatever the condition may be, it has been aggravated by shoes made over lasts which did not coincide with the normal contours of the feet, or allow normal weight thrust in walking.

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With this amazing problem facing the nation, every person interested in the general health and welfare of people at large should make an effort to learn something specific about the prerequisites of a good shoe. This is not difficult if one seeks for shoes made over lasts that have been designed to accommodate normal feet—not extreme types of shoes, but those which allow normal functioning of the feet. (Abnormal feet, as a rule, are more comfortable in this type of shoe than they are in shoes which are built especially for minor abnormalities. This would not include crippled or maimed conditions.)

Foot Planes.—Reverting to our definition, "that part of a figure on which it is supposed to stand," there are so many planes in the superficial surfaces of the foot that it is necessary for practical purposes, to isolate the major planes which have weight-bearing duties and which influence posture. The foot, then, must be observed as the support of the human framework and definitely as the foundation.

For all purposes of weight-bearing and postural balance, four major planes are used: (1) The primary plane on the bottom of the foot which includes the three main weight-bearing points, namely, the heel, the head of the first metatarsal, the fourth and fifth metatarsals and the outer or main weight-bearing arch. (2) The plane which passes vertically through the foot, bisecting the talus and passing between the second and third metatarsal heads. (3) The vertical plane bisecting the sustentaculum tali and passing through the proximal end of the fifth metatarsal. (4) The plane which passes vertically through the navicular, touching the medial side of the sustentaculum tali and the great toe joint.

Contouring Base Planes in Shoes to Satisfy Normal Feet.—The primary base plane (Number 1) should be slightly cupped at the heel and depressed at the heads of the first and fifth metatarsals with a slightly bowing pressure following along the outer weight-bearing arch.

Number 2 vertical plane represents the deepest portion of the heel cup and a dome should be developed on either side of this plane behind the heads of the second, third and fourth metatarsals with the highest point between the second and third metatarsal heads.

Number 3 vertical plane represents the foremost point of the support given by the heel of the shoe. Any contouring or bandage-like support should have its highest peak immediately anterior to this plane. The heel cupping should start posterior to this plane.

Number 4 vertical plane represents that portion of the shoe which acts as a support to the inner spring arch and gently tips the foot so that the major part of the body weight will flow to the outer border and main weight-bearing mechanism of the foot. The highest point of such support should come directly beneath the navicular and taper down to the primary base plane in front of the sustentaculum tali and behind the proximal end of the first metatarsal.

Shoe Lasts.—There was a time when a single block of wood was used for making both the right and the left shoe. Very little effort was made to contour such lasts and the quickest way to get the shoes comfortable was to stand in water or oil until the leather was thoroughly softened and then allow the shoes to dry on the feet. Dress shoes could be worn on either foot until such time as the foot itself had actually forced the shoe to adjust itself to right and left contours.

Fortunately, there has been continual progress made in the development of lasts until now we have available many fine lasts over which good-fitting shoes are made. Further improvements can and will be made. We must be patient, for last making is an expensive process and factories cannot discard "wood" at random.

There are far too many shoes being made over lasts which are perfectly flat across the bottom of the heel with too sharp a break in the metatarsals and without any thought of doming the anterior arch. Practically all style shoes disregard the contouring of lasts to fit base planes for normal feet.

Revolutionizing Old Ideas.—The advent of a new instrument for determining body and orthopedic balance, (Posturchek, formerly called Robalin) has brought about revolutionary changes in certain schools of thought regarding the importance of shoes as base planes. By the use of this instrument, postural defects are readily recognized through variations of the distribution of weight as received by the feet. Thus, definitely, is the foot established as a weight reception organ and as such shows the effect of superimposed weight as it flows down and through the feet.

Shoes and devices which are intended to influence or control the foot, such as various types of arch supports, "cookies," wedges, specially built contours, etc., have been developed so that they are identical for both feet. Too often these built-in features have been publicized and thrust upon the public as a panacea for foot ills. Through the use of the Posturchek, it is found that such procedure is questionable, especially in cases of body imbalance.

Body Imbalance and Its Effect on Feet.—After two and one-half years of research, Carter Harrison Downing says,

> **At least 60 per cent of the human race present sufficient differences in actual leg lengths as to alter equilibriums beyond the point of full compensation and give rise to secondary functional disorders. Actual shortening of the lower extremity demands pedal, pelvic and spinal compensations.[1]**

Recent research on short leg in Germany revealed that an average of more than ¼ inch difference in leg lengths was found in 100 skeletons. Inequality in leg length has the effect of shifting the body weight and causing a distortion throughout the structure. The hip, knee, ankle, and foot articulations all operate under stress as weight is shifted to either side of the normal mid-line. Inequality in leg length then becomes a great factor in body equilibrium and is perhaps the greatest single cause of postural difficulties. Failure of the body mechanisms to compensate for structural error and the accompanying stresses and strains throughout the entire structure constitute a leakage of energy, the amount of which we are unable to estimate. It is an established fact that postural faults or body imbalance will bring about fatigue and the efficiency and amount of energy available is constantly reduced.

These stresses and strains have their end results in the feet, and it is through such distortion and imbalance that a great majority of feet are "broken."

In the typical case of "short leg," the weight is carried predominantly on the long side. The hips, however, are shifted slightly toward the short leg. This causes a sheering thrust of weight which passes through the inside of the knee and ankle of the long leg. The weight concentration is on the inner border of the long leg and the foot has the appearance of being weak or broken. The foot on the short side may be normal or have a contracted arch with the weight predominantly to the outside of the foot. It is easy to recognize how serious an error would be committed should an arch support of any kind be placed under the arch which appears weak or broken. This is already the long leg and the support would make it still longer, in other words, make a bad situation worse.

Without going into detail, it can be said that there are numerous other examples of erroneous procedure which have come about through a lack of specific knowledge of weight distribution. Perhaps this one thing alone might explain why it is that there were at one time in the United States more than 500 different brands of so-called orthopedic shoes "with 70 per cent of all women seeking foot comfort."[2] Lack of consideration of weight distribution might easily be the explanation of the problem of the person who has tried as many as twenty-five different brands and constructions and still is in difficulty.

Altering Base Planes.—The answer to shoe problems lies in the changing of base planes in order to make up for Nature's failure to compensate for structural error. Lifts and wedges applied on the heel will change body balance. The amount of alteration in base planes necessary can only be determined through an instrument of precision which interprets dynamic weight distribution. Over a period of time Nature tends to change the structure of articulations and muscle groups in order to effect compensation for errors. It is difficult, almost impossible, to bring the adult body back to original structural relationships. The problem is to overcome Nature's failure. Alteration in base planes computed on actual metered measurements tends to overcorrection and is just as troublesome as the error itself.

An orthopedic shoe may embrace all of the principles considered correct in shoeing and still not fulfill the postural and pedal demands of the individual case. Correction of posturopedic imbalance lies in the changing of base planes. The formula or prescription being scientifically determined, the needed features are built into the shoe and by such procedure relatively normal postural and pedal balance is assured. As Dr. Downing says,

> This may necessitate a change in the complexion of modern methods; to say the least it should minimize the indiscriminate use of appliances purporting to be helpful to one and all. Specifically, this new method should improve the status of the shoe specialist by making him comparable to the registerd pharmacist who is relied upon to fill accurately the prescription of the physician. Thus may scientific shoeing come into its own.[3]

Accepted Principles of a Correct Shoe.—A correct shoe should in no way hamper the foot or alter balance. There should be ample space for the sole surface of the foot, contoured to correct balance and normal weight distribution. Enough room should be afforded the five toes so that they can extend and exert their proper leverage in propelling the body, resulting in easy, graceful foot balance. The heel seat should be snug and contoured on the bottom to tilt the foot gently toward the outer or main weight-bearing arch. The base of the heel should be broad, that it may give stability and accept the body weight solidly, and should carry a slight extension in front of the sustentaculum tali. A safe range in height is from seven-eighths to twelve-eighths (1 to 1½ inches). Raising the heel level higher than this throws the average foot out of balance by concentrating too much weight on the anterior transverse arch. An excessively high heel with small base constitutes a distinct menace to body balance, for weight is thereby deflected forward and maintenance of equilibrium resolves itself into a matter of sheer dexterity.

Shoes may be correct in themselves and not be corrective if base planes require alteration in order to meet some specific disorder of feet or of body balance. Makes and materials, workmanship and lasts do not alter the case when the shoe is inadequate to the need. Devices used for changing base planes can be incorporated into any properly fitted shoe.

Responsibility for Failures.—The doctor, the retailer and the manufacturer at one time or another have come to grief through factors beyond their control. The responsibility of a shoe to bring the results which may have been claimed for it may lie entirely with the wearer. The basis of trouble lies not in the shoe, not in the doctor who prescribed it, the man who fitted it, nor the factory that made it, but in the structural errors present in the patient's body. It would seem, then, that extraordinary precautions should be taken to establish responsibility by checking for irregularities by every known method. In this way each participant along the line has an even chance of basing opinions on facts and guessing can be definitely relegated to the background. There can be no substitute for accurate knowledge.

Institute of Postural Mechanics
693 Sutter St.

REFERENCES

1. Downing, Carter Harrison: The Orthodynamics of Posture. Jour. Am. Osteo. Assn., 1936 (May) 35:405-414.
2. Literary Digest: Firmer Foundations for Feminists, April 16, 1932.
3. Downing, Carter Harrison: Ibid., page 411.

Functional Foot Disorders

Functional foot disorders do not begin simultaneously with the onset of symptoms; disorder in the foot's mechanism has already existed for a long time, probably since infancy, while subjective symptoms signify the transition of the painless disorder into a painful one.

The symptoms of painful, or clinical disorder, are directly traceable to traumatic cellulitis involving the nerves. The first phase of treatment in acute cases, therefore, should be directed toward the immediate source of clinical symptoms and, after having controlled the inflammatory state of the internal tissues, toward establishing improved conditions of mechanical function. In the milder cases, these two phases of treatment may be instituted at the same time—Dudley J. Morton, "The Human Foot," Columbia University, Press, New York, 1935.

The Ptosed Colon*

A. G. REED, D.O.

Tulsa, Okla.

One of the penalties that the human race pays for assuming the upright position is the actual ptosis of the abdominal contents, or the constant liability to that condition. Compared with other organs, the colon suffers most from gravity displacement.

Definition.—A colon is considered to be ptosed when by reason of its physical malposition it itself becomes involved or produces pathology in other organs and tissues. Hence, the amount of ptosis becomes a question more of effect, than of the level it actually assumes. Body types, general health, and other factors make the classification, first, second, or third degree of ptosis unsatisfactory. For purposes of this discussion, the primarily pathological colon is not included. Reference in the main is made to the colon that is producing abnormal body conditions by reason of its being too low in the abdominal or pelvic cavity.

Etiology.—Among the many factors causing ptosis of the colon, only a few will be mentioned. Lack of normal health, sometimes to the extent of definite illness, that produces rapid devitalization of tissue, is a leading factor. Influenza has become a very common cause. Practically all wasting diseases are associated with this condition.

Regardless of the immediate causative factors, ptosis is produced by an elongation of the walls of the colon and the supporting mesentery, absence of abdominal fat, and lax abdominal walls. These defects may exist singly or may be coexistent.

Occupations requiring standing for considerable periods of time, as differentiated from walking, are a strong causative agent. Jobs in which vibrations or heavy lifting occur are also contributory. Individuals with a sagging posture find themselves subject to this defect.

One of the leading causes which has recently become increasingly alarming is the reducing fad. Incomparable damage in this respect has been and is being, done by those in the reducing racket who prescribe weight-reducing schemes which remove the supporting fat of the intestines at a too rapid rate, at the same time reducing body vitality.

This is sufficient reason for placing a check on the nefarious practice of the reducing racketeer and charlatan, and for striking a note of extreme caution on the part of the legitimate practitioner who is attempting scientifically to help the obese.

Our rather brief radiographic studies in this respect reveal the alarming fact that without exception patients who have been drugged into rapid tissue losses have suffered colon displacement. Our findings further indicate that it is most difficult to extricate the patient from this deplorable condition; the ptosed colon is most resistant to repeated attempts of replacement.

Too frequently following surgery, whether by reduced general vitality or by adhesions forming, or by both, the colon is ptosed and held out of position.

Another cause of colon ptosis is spinal lesions which bring about their effects by way of reflexes or by direct enervation. This is no longer a theory but a fact that every close observing osteopathic diagnostician repeatedly has noted.

The advent of the girdle among women, which is reinslaving them just as freedom was gained from the corset, seems to result in forcing the colon downward. The almost universal practice by men of supporting their trousers by belts instead of suspenders has a tendency to drag down the intestines.

Frequency.—Statistics are too meager to be of much value in determining the prevalence of ptosis of the colon. Since recognition has been dependent upon x-ray findings, dependable studies are of rather recent occurrence. The relation of ptosis of the colon, both directly and indirectly, to other organs and tissues makes it a co-conspirator in a large measure with abdominal and pelvic pathology. It is estimated to be several times as frequent in the female as in the male and is found mostly in asthenic individuals. It may occur in children of any age. Many of the so-called repeated nervous indigestion attacks are due to colon displacements.

Results of Ptosis of Colon.—Abnormal conditions resulting directly or indirectly from a too-low colon are legion. No part of the body, and scarcely any structure, is immune to its encroaching effects. Relaxation of the head of the cecum is a frequent cause of the incompetent ileocecal valve. Dragged downward out of position, regurgitation into the ileum is permitted, abetted by a too-relaxed valve.

The "retaining" appendix is closely associated with the low cecal head. It usually does not cause pain or active tenderness. There is insufficient peristalsis to empty the appendiceal content, especially since the dragging down process reduces the lumen at the site of attachment. Hence, retention and resultant decomposition of the food products follows. The toxic appendix is beginning to receive the important attention it merits. It is neither acute nor chronically inflamed; it simply retains food products and bacteria.

In a similar manner the "retaining" cecal head is produced. Bereft of peristalsis and contained within relaxed walls, there is nothing to lift the contents out of the head of the cecum; hence it remains to decompose into toxic by-products that slowly but definitely poison the blood stream.

Lying low in the pelvis, the head of the cecum in the female rests on the uterine adnexa on that side, causing distressing discomfort in the right pelvis. Too often surgical loss of these structures results without the real cause being suspected. Chronic

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pelvic conditions should always be suspected as being secondary to colon pressure until proved otherwise. Confusion in differentiating the head of the cecum and the uterine adnexa can largely be obviated by a local examination under the fluoroscope simultaneously with the barium meal or enema.

Colon Flexures.—Being the high points, the flexures represent the parts of greatest angulation of the colon. When rapid sagging of the transverse colon occurs, prolapses result with almost complete mechanical closing of the lumen, which can be opened only under pressure. This slows up to a varying degree the passage of the content of the colon and interferes with normal peristalsis.

Since peristalsis is somewhat dependent upon respiration for its stimulation, it naturally follows that the lower the colon is, the less opportunity for aid is realized. Although the colon is less dependent in this respect than the gastric cavity, it is definitely known to suffer when moved out of range of respiratory aid.

Transverse Colon.—Perhaps the most definite result of ptosis of the transverse colon is its deleterious effect on pelvic structures. The persistently displaced uterus that defies correction by every local means is usually ridden out of position by the colon. The radiograph alone will correctly diagnose the condition. Too often surgery is resorted to without sufficient data, with the result that within a year or two the shortened ligaments have again stretched and the uterus finds its old malposition, unless the weight of the colon is simultaneously lifted from it.

The chronic bladder irritation that permits no more than temporary relief is also often the result of the organ being pressed out of position by the ptosed transverse colon. Signs of prostate pathology, cystoceles, urinary retention and irritation upon voiding, are symptoms that demand a careful checking of the position of the colon. When surgical correction of a cystocele is unsuccessful, the difficulty in most instances is not incompetent surgery, but a failure to correct the original cause—the prolapsed colon.

As a co-worker of evil in the pelvis, the prolapsed sigmoid and pre-sigmoid assumes a guilty role. Not only by the resultant pressure on the left uterine adnexa, but by virtue of its anatomical derangement, it becomes a retaining receptacle that by pressure and reflexes gives rise to much of the rectal pathology that exists. The proctologists should devote an increasing amount of study to the twenty to thirty feet of the digestive tract above the rectum to avoid serious diagnostic and prognostic errors. The feverish ambition to eradicate crypts, hemorrhoids, and fissures will ultimately give way to the calm desire to correct pathology higher in the tract, which too often is alone responsible.

Unfavorable nervous reflexes constitute probably the greatest single symptom of the prolapsed colon. General nervous instability, the persistently painful sacroiliac or lumbar articulation, the dragging and indefinite intra-abdominal pain or discomfort, dull headaches, borborygmus, flatulency—all should arouse suspicion. Scarcely any organ or tissue of the body is entirely immune to the effects of a prolapsed colon. By way of toxins, reflexes, or direct contact, the close interrelation must be kept constantly in mind in evaluating systemic conditions.

The redundant or extremely elongated colon perhaps deserves to be included in this classification. Whether its origin is congenital, as some authorities claim, or due to postnatal defects, as others ardently argue, its existence means that at least portions of it are naturally low, and its many convolutions affect its own content as well as other organs.

Correction.—Complete and detailed analysis of all corrective methods for ptosis of the colon is precluded by the brevity of this paper. Cures are yet to be discovered. The following named measures, however, have been found of value:

1. Confinement in bed in serious cases. The advantages are two-fold: replacing the colon and increasing body weight. Numerous horizontal exercises, such as making the feet revolve in the air like riding an imaginary bicycle and other body and leg activities, should be carried on to maintain muscle tone.

2. The foot of the bed should be elevated in all cases. When this is done gradually, no unpleasantness ensues. Exercises to elevate the colon and lifting massage by the patient are of value. They also aid in the relief of constipation.

3. Testing for, and correction of, the pH of the colon content is necessary. Too often the alkaline reaction must be changed to acid, preferably by lactic acid tablets.

4. Body fat should be increased. Nutritious food is essential to accomplish this and to add to the general muscle tone.

5. Colonic irrigations, very conservatively given, in carefully selected cases, are useful for purposes of peristaltic stimulation. Irrigation is inadvisable as a routine measure.

6. Laxatives should not be given. Increased water drinking, fruit and vegetable consumption in conjunction with regular bowel habits make laxatives unnecessary.

7. Abdominal supports are seldom of value and often injurious. The almost impossible task of fitting a support in a manner that will actually maintain the colon in position renders the procedure very questionable.

8. The greatest single factor for permanent improvement is osteopathic manipulations. Two areas require particular attention: the spinal centers for nerve control of the colon, and direct manipulation for stimulation of the walls of the colon. This procedure must continue over a considerable period. Months or even years in recalcitrant cases may be required, depending greatly upon the patient's cooperation.

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REFERENCES

Barborka, Clifford Joseph: Treatment by Diet. Ed. 2. J. B. Lippincott Co., Philadelphia, 1935.

Beckman, Harry: Treatment in General Practice. Ed. 2. W. B. Saunders Co., Philadelphia, 1934.

Bertwistle, Alfred Pilkington: Descriptive Atlas of Radiographs. C. V. Mosby Co., St. Louis, 1933.

Deaver, John Blair: Surgical Anatomy. P. Blakiston's Sons and Co., Philadelphia, 1899-1903.

Graham, Evarts Ambrose: Year Book of General Surgery. The Year Book Publishers, Chicago, 1936.

Holmes, George Winslow, and Ruggles, Howard E.: Roentgen Interpretation. Ed. 4. Lea and Febiger, Philadelphia, 1931.

Thorek, Max: Surgical Errors and Safeguards. Ed. 2. J. P. Lippincott Co., Philadelphia, 1934.

The Treatment of Cervicitis and Uterine Malpositions*

R. P. BAKER, D.O.

Lancaster, Pa.

CERVICITIS

Cervicitis is inflammation of the cervix uteri. This term is preferred to endocervicitis because most inflammations, although first involving the endocervix, soon extend to other cervical tissues. Exceptions to this may be syphilis, tuberculosis, yeast and *Trichomonas vaginalis* infections, which will not be considered in this paper.

On reviewing recent records of examination of 200 female patients, it was found that 68 or 34 per cent of the cervices were clean. Cervicitis was present in 132 or 66 per cent of the patients. These 200 cases are not from a gynecological practice, but are women with various complaints ranging from headache to varicose veins and seem to provide a fair example of the general run of patients. Therefore, about 66 per cent of the women passing through our offices are afflicted with cervicitis and some of this 66 per cent will develop cancer unless the precancerous condition is removed.

Because every case of cervicitis is potentially malignant, I advise treatment whether or not the cervicitis is related to the patient's complaint. Treatment will be discussed under two headings—general and local.

General treatment has to do with three particular factors which influence the health of the entire organism as well as the health of its various tissues. These factors I think of as its intake, its output, and its structural alignment. The intake is probably above the caloric requirement and should be reduced to the needs of the organism. It should consist of foods providing adequate vitamins and minerals. Intelligent control of the intake will go far in regulating the output, but additional measures may be needed for a time. Enemata for immediate elimination, mineral oil till a bad bowel habit is overcome, and correction of rectal and anal disease such as hemorrhoids, fissure, and cryptitis will be of definite assistance. The third factor especially concerns the spinal lesion. Persistance of spinal lesions may prevent success of our therapeutic effort in one or more of three ways: *First,* it may prevent complete metabolism of a perfect intake with resulting toxemia; *second,* it may prevent normal output, thus providing another source of toxemia; and *third,* it may adversely affect the cervical tissues involved in the inflammatory process. Eradication of these three possibilities requires a comprehensive program of spinal therapy and must necessarily provide for correction of all spinal lesions. Beyond correction, I believe we cannot go, for I am not convinced that we can stimulate or inhibit beyond the normal without trauma.

Local treatment consists of applications directly to the cervix. Cervicitis may be acute or chronic, but a vast majority of my cases are of the chronic type. The infecting agent is sometimes gonococcus, but more often it is one or more of 15 to 20 other microorganisms. Whether acute or chronic, gonococcal or nongonococcal, my treatment has been essentially the same for the last seven years with results so satisfactory that I have not been tempted to change. Topical applications of astringent and germicidal substances have proved unsatisfactory in my experience. Douches have been of no value except as cleansing agents and for this I know of nothing better than saline solution—1 level teaspoonful of salt to a pint of water. Medicated tampons and suppositories were discarded seven years ago.

The object of treatment is eradication of infection with minimum destruction of tissue, and I have found copper ionization most satisfactory for uncomplicated cases. In brief, copper ionization is accomplished by electrolysis utilizing galvanic current to drive copper ions from a copper electrode, placed within the cervical canal, into the mucous membrane lining the cervix where they exert a germicidal action. The treatment is effective and safe when properly applied. It may be used during pregnancy without fear of accident if not applied too close to the internal os. Four to twenty treatments at weekly intervals are required, the average case responding in six to ten treatments. I have not applied the treatment during menstruation, but have observed no ill effects of its application immediately before and after.

The technic is as follows: With the patient in the dorsal position, place a warm, well-moistened towel folded to several thicknesses and of an area about 7 by 9 inches on the patient's bare lower abdomen. A metal plate about 5 by 7 inches is next laid on the wet towel and may be held in firm contact with the towel by placing a small sand bag or other weight upon it. Should this be uncomfortable or inconvenient, the indifferent electrode may be placed under the sacrum with the wet towel next the patient's skin. It is then connected with the galvanic unit by one of the cords.

Next insert a bivalve speculum in the vagina and bring the cervix well into view. Cleanse the cervix with dry cotton swabs and wipe excess mucus from within the cervical canal. The latter is a very tedious task unless the applicators are dipped in saturated solution of sodium bicarbonate which dissolves the mucus. Unless the canal is entirely freed of mucus, the lining membrane will not receive maximum effect, for the copper ions will not penetrate to a depth of more than 1 to 2 millimeters. Thorough cleansing of the canal insures good contact of the electrode with diseased tissue.

Choosing a cervical electrode of a size to fit the canal easily but snugly, insert it just to the internal os and connect it with the other cord from the galvanic unit. Make sure the rheostat is turned to zero and turn on the current. Arrange the polarity

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switch so that the positive current will pass to the cervical electrode, then with the rheostat, slowly increase the current until it registers 12 to 15 milliamperes. While this is being done, it will be necessary to hold the cervical electrode in the cervix, but it will become quite firmly attached to the wall after the current has been turned on for two or three minutes. If the vaginal walls approach the electrode from between the blades of the speculum, they can be packed away with dry cotton. After 12 to 15 milliamperes of positive current have flowed to the cervix for a period of twenty minutes, the rheostat is slowly turned back to zero and by means of the polarity switch the polarity is reversed so that negative current will flow to the cervical electrode. By means of the rheostat, the current is then slowly increased to a point where the patient complains of a prickling sensation at the indifferent electrode. When prickling is felt, reduce the current to just below this point.

While the cervix is receiving the positive current the electrode becomes tightly glued to its wall, and, were the electrode to be forcibly removed, considerable trauma would result. Four or five minutes' application of the negative current will loosen the electrode, so that it can be removed without difficulty. This point may be determined by rotating the electrode without breaking contact. When it is free, the current is slowly reduced to zero and the electrode removed. To it will be attached a thin coating of coagulated, greenish-colored mucus, and the wall of the cervical canal will be covered by the same substance. This is the result of the copper ions being driven into the tissues and a certain degree of superficial coagulation.

When properly applied, the treatment is painless. If discomfort occurs at the indifferent electrode, the towel is probably too dry. If slight, colicky pains are felt in the uterus, the electrode is too close to the internal os. To avoid discomfort, the rheostat should read zero when the electrodes are applied, while the polarity is being changed, and when the electrodes are removed. If the current is increased or decreased at the rate of about 4 milliamperes a second, no shock will result from the change.

Prevent increased air pressure in the cervical canal by keeping the ventilator in the electrode free from obstruction. Steel wool is convenient for cleaning the copper, which should be well polished to permit maximum ionization.

Nabothian cysts are treated by puncture with electric cautery, and success depends on complete destruction of the lining membrane. If not done thoroughly, the wound heals over the parts not destroyed and the cysts will re-form. Cautery is also used in cases of cervical laceration. Here the exposed tissue is striped by searing lines radially from the external os to the periphery of the cervix. The lines should be burned about one-eighth of an inch apart and to a depth of from one-sixteenth to one-eighth of an inch depending upon the degree of resultant puckering desired. The deeper the tissue is burned, the more pronounced will be the contraction. No bleeding will occur unless the cautery wire is too hot. A wire heated to cherry red has been found most satisfactory. This procedure sometimes causes slight discomfort, but I have not found anesthesia necessary. The immediate effects are similar to burns of other tissues, i. e., inflammation and serous discharge. Patients should be informed that the discharge will be rather profuse and that slight bleeding may occur six to eight days after treatment as a result of sloughing. Maximum effect will be accomplished in five to six weeks after which lighter treatment may be applied should areas of inflammation persist.

In treatment of cysts and laceration, similar results may be obtained with the use of electrocoagulation, but I have found actual cautery more convenient. Either cautery or coagulation is applicable only to cysts which can be seen or felt. Occasionally they form so deep within the tissue that amputation of the cervix is necessary.

MALPOSITIONS

During the last decade malpositions of the uterus have caused me much less concern than they did in the years preceding. I have become convinced that, with the exception of prolapse and unless accompanied by inflammation or its effects, uterine malpositions are symptomless. Years ago when a woman, complaining of chronic low-back pain, consulted me, I immediately expected and invariably found one or both of two conditions to account for it. The first and more common finding was an osteopathic lesion; the second was retroversion of the uterus. Although able to give most of these patients a varying degree of temporary relief, the cases receiving permanent cure were indeed few. The failures were contributed to my lack of skill in osteopathic and gynecological technic.

That my effort is somewhat more successful today is due to more accurate diagnosis. Low-back pain in women presents one of our most interesting diagnostic problems and is due rarely, if ever, to uncomplicated retroversion of the uterus.

In cases where both prolapse and retroversion are present, I have found the prolapse responsible for a major portion of symptoms. This prolapse is nicely demonstrated by placing a doughnut pessary to hold the uterus up without correcting the version. Although I have seen retroversion with descensus in a virgin 60 years of age, it is usually found in the presence of cystocele resulting from obstetrical trauma. We sometimes hear of descensus causing congestion and bogginess of the fundus by mechanical interference with circulation, but careful study of uterine blood supply and many cases of complete prolapse with no congestion of the fundus have led me to search for other causes of the congestion when it is present. I am of the opinion that where sacral backache and pelvic discomfort are present in these cases, the symptoms are due to drag on the uterosacral ligaments rather than to circulatory disturbance.

Uncomplicated lateral versions of the uterus I have yet to see, for without exception, in my experience, they have been the result of pelvic inflammation or pelvic surgery.

Only one case of symptom-producing anteversion has come under my observation. This was a college girl of 19 years of age who came with a ready-made diagnosis which I was loath to accept. She explained that on three occasions within three years her uterus had tipped forward against the bladder causing excessive urinary frequency which was instantly relieved by replacement of the uterus. Upon examination the fundus was found lying very close to

the pubis. With no difficulty whatever I pushed it upward about one and one-half inches where it seemed to remain and asked her to return the following day. The next morning she telephoned that relief of symptoms had been immediate. This is the only case of actual anteversion I have recognized.

Anteflexion of the uterus is a very common lesion, if we may call it a lesion, and of this I am not at all sure. Nor am I convinced it is an etiological factor in dysmenorrhea, though commonly found in girls who have menstrual cramps. It is much less common in parous women, probably because gestation and involution materially reduce the angulation. I have found retroflexion rather rare, but always combined with retroversion. Anteflexion is frequently found in combination with retroversion, but I have not known it to produce symptoms unless complicated by inflammation or its effects.

In the 200 cases mentioned previously, the records report uterine position normal in 136 or 68 per cent. In 58 or 29 per cent the uterus was in retroversion and in 6 or 3 per cent it was in a position of lateral version. Anteflexion was not recorded in this series for we consider it within the normal unless the angulation is very acute.

Of far more importance than position of the uterus is its mobility, for it is by testing this that one is able to demonstrate that inflammation is, or has been, present. In the normal adult pelvis the cervix can be moved easily and painlessly in all directions at least 1 inch from its usual position. If, on moving the cervix, its excursion is found limited by pain and tension, some degree of inflammation exists at the site of pain and treatment should be directed to the inflammation rather than to position of the uterus. With one exception I believe this to be a dependable treatment program in all cases of malposition.

The exception is prolapse. Here successful treatment must be mechanical and direct. Uterine prolapse is a progressing deformity. The pull of gravity from below and the push of intraabdominal pressure from above can stretch the uterine ligaments to such a degree that the entire organ projects from the vaginal orifice. My own opinion is that, except in pregnancy, uterine ligaments once stretched stay stretched. Of their regaining tone I have heard much and seen nothing.

Treatment of prolapse is palliative or surgical. Palliative treatment is the use of pessaries or tampons for uterine support and is indicated where surgical treatment is contraindicated. Surgical treatment varies as to the mechanical problems involved. In the very rare cases of prolapse without obstetrical trauma, low laparotomy and shortening of the uterine ligaments, especially the uterosacrals, is done. Slight prolapse due to pelvic relaxation can be corrected by pelvic repair. Where moderate prolapse exists in presence of pronounced cystocele, an inter-position operation is done. In this the bladder is dissected free from the cervix, the peritoneum opened and the fundus tipped forward and anchored under the bladder, thereby fixing the uterus in position and providing adequate support for the bladder. Where the cervix has reached or protrudes from the vaginal orifice, vaginal hysterectomy has been my choice of operations.

I have become convinced that with the exception of prolapse, uncomplicated malpositions of the uterus are symptomless and do not require treatment. When symptoms are present, they are due to inflammation and it is the inflammation toward which therapy should be directed, whether in the cervix, fundus, tubes, ovaries, or uterine ligaments. Some of the inflammations require surgery, but a majority will respond to various nonsurgical treatments such as spinal therapy, intrapelvic manipulation, short-wave, copper ionization, cautery, Elliott treatment, rest, and correct posture.

45 East Orange St.

Certain Remote Effects of Upper Cervical Lesions*

LOUISA BURNS, M.S., D.O.
South Pasadena, Calif.

PART III

IMMEDIATE EFFECTS OF CERTAIN CERVICAL LESIONS UPON THE PHARYNX OF RABBITS

Louisa Burns, M.S., D.O.

These experiments were performed to determine whether cervical vertebral lesions might modify the circulation through the pharyngeal mucous membranes.

The immediate effects produced by vertebral lesions seem to be due to reflex action. Abnormal sensory impulses from the articular surfaces and related tissues reach the nerve centers in the spinal cord, and affect the related nerve cells of the same and adjacent segments. These relations have long been established and are commonly employed in such therapeutic methods as the application of heat, cold, counterirritations and other physical agencies. If central nervous relations exist between the sensory nuclei of the cervical nerves and the vasomotor centers of the pharynx, then lesions of the cervical vertebrae might affect the circulation through the pharynx. The presence or absence of rami communicantes in the cervical segments is of no significance, since the spinal segments of the cervical cord are known to be intimately associated with the upper thoracic spinal segments. In these, the relations between the gangliated cord of the sympathetic and the cerebrospinal centers and nerves are established by means of the white and gray rami communicantes. These anatomical relations explain the pathways concerned in the immediate effects of cervical lesions upon the pharyngeal circulation. The experiments were performed in order to determine the functional relations of the nerve center concerned. The tests made upon rabbits may be described first.

Experiment A.—Young, adult, male rabbits, born at Sunny Slope, of normal parents and themselves apparently normal from birth, were used. Each rabbit was examined and found normal.

Rabbit No. A 1: Immediately after chloroform

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anesthesia the mouth was opened widely and the pharynx and tonsils exposed to view. The tissues were watched for ten minutes, during which time no visible changes occurred in the membranes.

The occiput was held in a position of lesion by pressure upon the top of the head, directing it strongly toward the right side. The other hand of the operator held the cervical spinal column in its normal position. Temporary lesion of the occiput was thus produced. Immediately the mucous membrane of the throat became definitely paler. The pressure was then removed and the lesion found to be permanent. The color returned to the membranes and became deeper than before the lesion was produced; this was visible thirty seconds after the lesion had been produced. A second paling then occurred, less marked than the first, and this remained two or three seconds only. A second flushing was still more pronounced than the first; this was noted ninety seconds after the lesion had been produced. The flushing varied in depth, but no later paling was observed in this rabbit. Three minutes after the lesioning, the brilliant pinkish tinge of arterial blood affected the entire pharyngeal membrane. Within six minutes the color deepened and assumed a purplish tinge, suggesting venous blood. The dusky tinge of typical passive congestion did not occur. This purplish color remained as long as the lesion persisted, in this case for thirty minutes. The rabbit then began to show some evidence of cardiac weakening and the test was discontinued. The anesthesia was stopped, the rabbit was allowed to regain consciousness, and was placed back in his cage, apparently none the worse for the test. The next day a definite and permanent lesion was found which involved the occiput and the atlas. The rabbit was allowed to live in order that a later study of the effects of this lesion upon the mucous membranes of the throat might be made.

Rabbits No. A 2, A 3, A 4, and A 5: Tests made for rabbit No. 1 were repeated with identical findings. These rabbits were killed. Autopsy showed no abnormal condition except those evidently due to the experiment.

Rabbits No. A 6 and A 7: These rabbits were subjected to the same technic except that no lesion was produced. The color of the pharynx remained normal for twenty minutes, at which time the test was discontinued. Autopsy showed no abnormal condition.

Experiment B.—Rabbit No. B 1: Chloroform was used for anesthesia. The mouth was widely opened and the throat exposed to view. There was no visible change in the membrane during four minutes observation. The third cervical vertebra was then found, and the tip of the middle finger placed upon its right articular process. The other fingers supported the atlas and axis, and the fourth and fifth cervical vertebrae. There was a slight paling of the mucous membranes during this manipulation. The tissue was allowed to rest, with no application of pressure, for two minutes, during which time no further change in color was visible.

Pressure was then applied and the lesion produced. This was associated with sudden paling of the membranes of the throat but not visibly of the tonsils. This paling was evanescent; it was not posthen occurred. This color fluctuated slightly but there sible to measure its duration in seconds. A flushing was no definite paling thereafter. For five minutes or so the color was arterial, but a bluish shade infused the pink membrane gradually, between the fifth and the ninth minutes, and at the end of ten minutes after the lesion had been produced, there was a definitely purplish or venous tint over all the membrane. At the end of fifteen minutes after the lesion had been produced, the pressure was relieved, though the fingers remained in place. The lesion was spontaneously corrected by relief of the pressure, and during the next five minutes the bluish tint gradually faded, the arterial color returned, and this, in turn, diminished gradually, until, twenty minutes after the relief of the pressure, the pharyngeal membranes were normal in color. The rabbit was then killed and the tissues examined to see whether any logical bruising had occurred at the site of the pressure. No evidence of injury could be found in that region.

Rabbits No. B 2, B 3, B 4 and B 5: The tests for No. B 1 were repeated, with the same findings except that the time relations varied slightly.

Rabbit No. B 6: Tests for No. B 1 were repeated, except that no lesion was produced. The color of the pharynx remained normal for twenty minutes, at which time the test was discontinued.

Similar tests for rabbits were repeated upon other groups of animals, including rabbits ten days old; guinea pigs ten days old; guinea pigs four months old; small kittens, age not known; small puppies, age not known; white rats two months old. In these groups, lesions of the atlas and axis gave identical findings.

PART IV

PRELIMINARY TESTS CONCERNING THE EFFECTS OF CERVICAL LESIONS UPON PERISTALSIS

Georgia Steunenberg, D.O., and Louisa Burns, M.S., D. O.

Certain clinical records and some earlier experiments suggested the etiological importance of upper cervical lesions in pyloric spasm, hypertrophic pyloric stenosis, certain spastic conditions of the intestines and other evidences of functional disturbances which seem to be related, anatomically, to the abdominal distribution of the vagus nerves.

Further studies of these relations were made during the years 1931 to 1937, including the following tests with rabbits:

S 1: Gray rabbit, male, aged three months, normal, and born of normal mother and father; previous generations not known. Both father and mother albino; previous mating of parents not known.

Examined by Dr. Steunenberg, no lesions or abnormal conditions found. Chloroform anesthesia. Some struggling occurred but not enough to cause lesions or to interfere perceptibly with pupils or heart beat.

Abdomen opened under deep anesthesia. Viscera watched for eight minutes; peristalsis increased moderately for two minutes, then diminished to about condition noted on laparotomy and remained constant.

Dr. Steunenberg produced lesion between the second and the third cervical vertebrae, using gentle manipulations; lesion persistent. During the next two minutes the intestines relaxed and became slightly deeper pink, then rapidly became paler pink and

peristaltic movements increased. Circular contractions became so deep, apparently, as to cause occlusion; these remained almost or quite in the same place, and did not vary in position so long as the experiment continued. In several instances circular and longitudinal contractions produced groups of four swellings separated by a cross-like contraction, and surrounded by contractions.

Experiment terminated by death of the rabbit. Peristalsis continued for several minutes after cessation of respiration and heart beat. Ring-like contractions persisted for ten minutes, after persistalsis ceased, when observation was discontinued.

S 2: Healthy male rabbit, albino, aged about eighteen months. Examined by both of us and found normal. Chloroform anesthesia, no struggling. Abdomen opened and intestines exposed to view for two minutes. During this time normal peristalsis was visible in stomach and intestines. Dr. Steunenberg produced axis lesion by gentle manipulations which rotated spinous process toward the left. Rabbit's respiration ceased at once. Heart contracted rapidly for a few seconds, then ceased. Autopsy showed abnormal condition not explained by manipulations. No bruising was found anywhere.

S 3: Female albino rabbit, aged four months, healthy, born on the place, of normal parents. Chloroform anesthesia, no struggling. Abdomen opened, intestines exposed to view, watched for about two minutes, during which time normal peristaltic waves were observed. Dr. Steunenberg produced an axis lesion by means of steady pressure applied with slowly increasing force. Rabbit's respiration became slower, heart beat rapid and feeble. Direct manipulation over the heart through the diaphragm for two minutes. Condition improved.

On production of the lesion, peristalsis increased suddenly in the small intestine, but none was seen in the cecum. Ring-like contractions occurred in the stomach near the pylorus and at several intestinal areas; these remained until after the rabbit had been dead for ten minutes, when observation was discontinued.

S 4: Guinea pig, female, healthy, apparently very old but otherwise normal. Chloroform anesthesia, no struggling. Abdomen opened and intestines exposed to view. Normal peristalsis observed for one minute. Dr. Steunenberg produced an axis lesion by steady pressure. Respiration ceased, heart became rapid and weak; pressure producing lesion slightly relieved and condition improved. Pressure increased slightly; lesion produced, condition of pig still fairly good.

Within a few seconds after the lesion was produced, peristalsis increased in intestines, including the cecum. Ring-like contractions occurred in the stomach near the pylorus and in several areas in the small intestine. These remained present for about three minutes. The lesion was corrected, the ring-like contraction disappeared. Peristalsis ceased and the small intestine dilated, becoming larger than before the experiment was begun.

The respirations were becoming feeble and the experiment was terminated by section of the chest wall. Autopsy showed no abnormal condition not explained by the experiment. No bruising of the tissues occurred.

Notes.—These experiments were repeated upon other rabbits, puppies, and guinea pigs of different ages. Occiput, atlas, axis, and third cervical lesions gave similar reactions, especially the persistent and marked ring-like contractions of pylorus and small intestine.

The place of such lesions in the etiology of certain human cases of obstinate constipation, pyloric stenosis, and intestinal obstruction of unknown origin, is suggested.

Experiments were performed by Dr. Burns to determine the immediate effects of occipital lesions upon the circulation through certain abdominal viscera, in guinea pigs, under ether anesthesia.

Thirty-six guinea pigs, long-haired Peruvians, three months old, born of normal parents, bred and kept under normal conditions, never subject to any cause of disease, were chosen. These pigs had never shown any evidence of ill health.

The pigs were anesthetized with ether. When marked struggling occurred, the pig was killed by rapid forcing of the ether, and autopsy performed at once. This was in order to determine the color of normal abdominal viscera under ether anesthesia. This occurred in six cases.

The abdomen was opened and the pancreas brought forward. The stomach, spleen, and pancreas were thus exposed to view. No rough handling occurred. The color of the viscera was noted for three minutes, in order that any change due to the section of the abdominal wall might be recognized.

The occiput was then forced into a slightly abnormal position resembling the accidental occipital lesion of human subjects. The left hand held the cervical spinal column rigid; the right hand held the occiput firmly and turned it so that the top of the head was diverted to the right side as far as it would go easily, and then forced very slightly beyond that point.

Guinea pig 2: The occiput was forced to the left side, in the same manner.

Guinea pig 3: The occiput was forced to a right and posterior position.

Guinea pig 4: The occiput was forced to the right and anterior position.

Guinea pig 5: The occiput was forced to left and posterior position.

Guinea pig 6: The occiput was forced to left and anterior position.

Guinea pig 7: The occiput was forced directly forward.

Guinea pig 8: The occiput was forced directly backward.

Guinea pig 9. The occiput was rotated with the face toward the right side.

Guinea pig 10: The occiput was rotated with the face toward the left side.

Guinea pig 11: The occiput was forced into a position which included a rotation with the face to the left, and also directly to the left.

Guinea pig 12: The occiput was forced into a position which included a rotation with the face to the left, and also directly to the right.

Guinea pig 13: The occiput was forced into a position which included a rotation with the face to the right, and also directly to the right.

Guinea pig 14: The occiput was forced into a position which included rotation with the face to the right, and also directly to the left.

(Sixteen other pigs died under the anesthetic during similar manipulations. These were autopsied at once, in each case, and were omitted from the numbers above employed).

The lesion was held, in each pig, until the weakening heart beat indicated impending death. During this time the abdominal viscera was under observation. Various gastrointestinal movements occured, including rather marked and persistent ring-like contractions. These were not carefully watched. Only the color changes in the pancreas, spleen, and stomach were watched for. No such changes were visible.

The pigs died much more quickly under the anesthetic plus the lesion than they did under the anesthetic without the lesion. There was no perceptible difference between the pigs with the different types of occipital lesion.

It was concluded that the changes in the abdominal viscera following upper cervical lesions in guinea pigs, probably were not primarily due to circulatory disturbances.

Sudden death of these lesioned animals under anesthesia suggests a possible cause of anesthetic accidents during human surgical operations.

BEHAVIOR

A striking influence of upper cervical lesions upon human subjects is shown by behavioristic changes following such lesions. Dr. Jennie Alice Ryel[4] has reported a group of problem children in which such lesions were found, and in which the correction of the lesions was considered an important factor in recovery. Case reports have been published which indicate that such lesions, suddenly produced, may exert detrimental effects upon the behavior of young people, so that a diagnosis of dementia praecox may seem unavoidable; yet the correction of such lesions, at an early date, may be followed by complete recovery. In a few such cases, twenty years or more have passed since recovery, during which time no evidence of mental disturbance has been noted.

Experiments with the reaction time of normal human subjects were reported in Bulletin No. 1, of the A. T. Still Research Institute.[5] Experiments performed on normal young men in the College of Osteopathic Physicians and Surgeons (Los Angeles), not yet published, show similar results. Briefly, it may be said that the reaction time is increased by such lesions by 30 to 50 per cent. That is, the time required for the simplest process requiring brain activity is increased by lesions of the atlas or neighboring bones to a degree which might be serious under certain conditions. The physiological basis for this lengthening of the reaction time is suggested by certain animal experiments to be described later.

Lesions of the occiput or the atlas tend to abnormal positions of the head and face. Rabbits with such lesions present an appearance, often rather amusing, of slyness, fear, or superiority. Several human reports indicate a similar relationship.

The occiput or the atlas lesion renders the normal symmetrical position of the head uncomfortable. The patient may throw the head forward, in which case he seems to be shy or to have a sense of inferiority. The head may be thrown backward, in which case he seems to show a sense of superiority. In any case, there is usually a symmetrical position of the head, which may indicate slyness, or ennui, or some other affectional state. Since in any conditions the imitation of any emotional state tends to facilitate that feeling, and since the appearance of any emotional state tends to induce other people to react to that state as if it were actually present, behavior changes due to lesions are easily understood. Various abnormal behaviors, such as repressions, obsessions, complexes and other conditions, differently named by different schools of psychiatry, have been so induced in human subjects. Recovery in several such cases has followed, very naturally, the correction of the lesion. No doubt the associated changes in the circulation through the meninges and brain, and the increased efficiency of certain ductless glands influenced recovery. These conditions, probably all, are concerned in recovery in human subjects, as they are concerned in pathogenesis in animal subjects affected by similar lesions.

810 Prospect Ave.

4. Ryel, Jennie Alice: Behavior Problems of Children. Bulletin No. 1, Association for Osteopathic Child Study, 40, Passaic St., Hackensack, N. J., 1937.

5. Research Institute, A. T. Still: Bulletin No. 1, 540 N. Michigan Ave., Chicago, 1910.

CINCINNATI—A BEAUTIFUL CITY

The Forty-Second Annual Convention of the American Osteopathic Association is scheduled to take place on July 11 to 15, 1938, in one of the proudest cities in the United States. It has a right to be proud. Situated on seven hills overlooking the Ohio River, the city offers innumerable vistas of rare beauty. A great number of parks are located at vantage points above the river. In one of these nestles the fine Art Museum, which may be reached by a novel ride up one of the few remaining active inclines in the United States that still transport street cars from one level to another.

Cincinnati is proud of its many industries, too, chief among them being the famed Rockwood Pottery and the Sterling Glass Works. Of great interest to visitors also are the studios of WLW, the world's most powerful broadcasting station. These points are but a few of the many interesting places to visit when you come to Cincinnati. Begin planning now to attend next summer.

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ANTISEPTICS IN ACUTE SKIN AND ORIFICIAL INFECTIONS

Webster's dictionary defines neutral as "neither acid nor alkali." Neutrality is incompatible with life. Every body fluid is either acid or alkaline; it is positive or negative. Were this not true, physiological processes would be nonexistent.

Other factors, such as barometric pressure, humidity, temperature, light, and static electricity, also enter into physiological processes. The psychologist tells us that our moods may cause variations in physiological processes, e.g., such emotions as fear, joy, and sorrow. The special senses, even though stimulated from a great distance, may alter physiological activity. Deciduous plants undergo periods of rest as the result of temperature and light changes.

Plants that flourish in an alkaline soil may refuse to grow in an acid soil. Plants that thrive in the shade may wither in the bright sunlight. Bacteria are classified as plant life and conform basically to the laws that govern plants. Some plants prefer acid soil, but will continue to exist when a change to slight alkalinity occurs. Some plants prefer an alkaline soil, but will continue to exist in a slightly acid soil. Repeated culturing in the acid soil may lead to vigorous growth of the bacteria; bacteria thus cultured, when thrown back into an alkaline soil, require repeated culturings before they again become vigorous in the alkaline soil.

It is not difficult to destroy bacteria in a test tube. Temperatures far below boiling will rapidly destroy all vegetative forms. If we change the reaction of the medium in the test tube pH 2.0, bacteria will cease to grow and gradually die. The secretions of the skin are acid. The skin constantly has numerous bacteria that continue their existence in the acid "soil" of the skin, pores and hair follicles.

For the treatment of injuries to the skin, nature has provided alkaline blood and alkaline lymph. It is an old saying, "Let the cut bleed," for blood, though containing all the nutritional elements for bacterial growth, is still unfavorable to the growth of skin bacteria, because the skin bacteria are adapted to life in an acid medium. When the skin injuries require the attention of a physician, this fundamental principle should be remembered.

The greatest antiseptic produced by man is soap. And most skin cuts and abrasions will heal if this remedy is applied. I have tested pus from many boils and carbuncles and invariably it has been acid in reaction. I have found a few skin infections that were alkaline in reaction. The old-fashioned remedy—soap and sugar poultice—has scarcely been improved. Acid antiseptics may be applied of sufficient strength to destroy these germs, but they are likely to destroy the tissue as well. If we observe the rule, the change should be at least pH 2.0. One will readily see that the pH of an acid antiseptic to be effective should necessarily be pH 4, while an alkaline antiseptic to be equally effective would have to be pH 7.1. This explains the marvelous success that has been attained by the use of epsom salts packs in the treatment of local skin infections. Let us emphasize the need of determining in advance the reaction of the wound discharges and know in advance the reaction of the antiseptic employed.

All bacteria are largely colloidal bodies. Antiseptics containing mercury, iodine, essential oils, and other mineral and organic substances, may react to change the colloidal structure of bacteria and their excreta. Such antiseptics are therefore of value. However, the most potent antiseptic containing such substances may be less effective than a simple alkaline lotion.

Some of the dyes and mercurial antiseptics are acid, others are alkaline. In order to apply them specifically, their reactions in relation to the reaction of the wound to be treated should be determined in advance.

The principle that we have applied to the skin should be applied to all body cavities as well. In the vaginal orifice, if the pH is below 6.7, *Trichomonas vaginalis* will not be found. And only when the pH is well above 7.0 will the *Trichomonas* give pathological manifestations. I have found that 1 per cent lactic acid and 1 per cent ether used as a douche will quickly overcome such infections. In the colon, amebae will not be found where the stools and mucus are acid. In the treatment of hemorrhoids, the reaction should be carefully studied before the antiseptic is applied.

THE JOURNAL published an editorial on this subject in April, 1937. Following is a greatly increased list of antiseptics in common use. I hope that members of the profession will observe and criticize my findings.

ANTISEPTIC	HYDROGEN-ION CONCENTRATION
Antiseptic tablets 1-1000 (mercuric chloride)	2.45
Mercarbolide	6.10
Acriflavine, 1-1000	6.90
Amfetin	7.40
Alcoholic mercurochrome	7.41
Potassium mercuric iodide, 1-500	7.44
Argyrol, 5%	7.50
Metaphen, 1-500	7.72
Solution merthiolate, 1-1000	8.+

Tincture merthiolate, 1-1000	8.+
Vita-cell	8.+
Green soap	8.+
Potassium permanganate, 1-500	8.+
Alkolol	8.+
Lav Odin	8.+
Aq. brilliant green	3.15
Aq. crystal violet	4.98
Aq. Gentian violet	4.2
Chinosol	4.2
Copper sulphate	3.98
Dichloramine T Aq.	4.5
Chlorazene (Becomes more acid on standing)	6.9
Hexylresorcinol	6.3
Resorcinol	6.4
Protargol	7.00
Novocaine—Aq.	4.2

W. CURTIS BRIGHAM.

THE BLIND LEADING THE BLIND

A symposium on low-back pain was presented at the annual meeting of the American Academy of Orthopedic Surgeons at Cleveland on January 14. The closing remarks were made by the chairman, Joel E. Goldthwait, M.D., Harvard graduate and well-known allopathic writer on body mechanics. They are published in *The Journal of Bone and Joint Surgery* for July, 1937.[1] Some of these remarks are quoted here because they tend in part to confirm the osteopathic viewpoint on the etiology of low-back problems, while at the same time, when it comes to treatment, they reveal the stubborn clinging to old ideas that characterizes allopathic medicine.

Dr. Goldthwait begins by saying that "backache usually means strain of the joints of the back with, at times, so much pressure upon the nerve roots that referred pain results."

He comes to this conclusion by reason of his experience and that of recognized authorities in the various specialty fields. Perhaps the most common misunderstanding among lay persons and some general practitioners, regarding backache, is that it is due usually to genitourinary pathology. Frank H. Pemberton, M.D.,[2] Professor of Gynecology at Harvard, has written stating that "backache due to purely gynecological conditions is relatively rare," and a similar statement has been made by Edward L. Young, M.D.,[3] representing the urological point of view. (One of our own osteopathic surgeons, Dr. Ralph P. Baker, writing on uterine malpositions in THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION, this issue, says, "Low-back pain in women . . . is due rarely, if ever, to uncomplicated retroversion of the uterus.")

"It is apparent," concludes Dr. Goldthwait, "that while the diseased conditions of the pelvic organs or of the genitourinary tract in men or in women may at times be associated with backache, usually in these cases the other symptoms are so conspicuous that there is very little question as to the main source of the difficulty."

The frequency of the finding of anatomical variations and congenital defects causing backache was brought out by Dr. Goldthwait. In the discussion of the fusion treatment for such conditions, he wisely calls attention to the fact that "if it becomes necessary for one joint to be fused, some other joint is obliged to take up the work which that joint formerly performed, and it should be appreciated that the joint which has the added strain put upon it may many times cause as much difficulty as was previously present."

With tongue in cheek, so to speak, he follows this statement with "there are very few in this room who have not had more or less backache, but probably few, if any, have felt it necessary to have the back fused because of this."

Herniation of the nucleus pulposus posteriorly through the spinal ligament into the spinal canal is a comparatively recent discovery of the cause of backache. It is believed that this occurs in the lumbar spine when the vertebrae are in extreme extension, the nucleus pulposus being squeezed with the result that it breaks through the weakest part of the posterior portion of the controlling ligament. Dr. Goldthwait points out that laminectomy in these cases does not always give relief unless the lumbar spine is flattened at the same time, i.e., it should be adjusted to its normal position, if possible, so as to relieve the abnormal compression upon the nucleus pulposus. The osteopathic physician would think of releasing this pressure first by correcting the abnormal position of the lumbar spine and very often would obtain a satisfactory result without resorting to surgery.

The allopathic treatment for industrial injuries, Dr. Goldthwait frankly states, has been unsatisfactory. Such treatment consists merely of strapping the back or administering drugs. He says further, that "since it is almost impossible to use any form of support that will satisfactorily protect these joints when the patients are up and about, it seems to me . . . that these patients should be put to bed for a week or ten days, with any form of local application to the low back that will stimulate the circulation . . ."

We naturally assume after reading the next statement that *any form of local application* means heat lamps, hot packs, diathermy, etc., because he says, "simple manipulations often relieve the symptoms, but rarely cure them." Heat and rest also may relieve symptoms, but does it *always* cure them? These cases that do not get well after rest and heat are the kind of cases which call forth the reproach which Dr. Goldthwait says is present in the minds of compensation boards, reproach for the present methods of allopathic industrial physicians which are not successful in the care of low-back injuries.

The statement that manipulation often relieves the symptoms but rarely cures the condition should occasion surprise, coming as it does from the man whose name,[4] for thirty-two years, has been linked

1. Goldthwait, Joel E.: Low-Back Lesions. Jour. Bone and Joint Surg., 1937 (July) 19:810-813.
2. Pemberton, Frank H.: Referred to by Goldthwait, ibid.
3. Young, Edward L.: Referred to by Goldthwait, ibid.
4. Goldthwait, Joel E., and Osgood, Robert B.: A Consideration of the Pelvic Articulations from an Anatomical, Pathological, and Clinical Standpoint. Boston Med. and Surg. Jour., May 25, 1905, and June 2, 1905.

with the sacroiliac lesion which Dr. Still had found so long before, which was described in osteopathic literature[5] [6] in 1899 or earlier, and which was introduced to Harvard Medical School by an osteopathic physician. In fact he is the one whom Dr. Leonard W. Ely had in mind when he wrote in "The Cyclopedia of Medicine"[7] (1933) that "The first ray of light came from the osteopaths. A former osteopath, studying medicine at Harvard, interested the orthopedic men there with the story that the osteopaths were curing lumbagos and sciatica by manipulating a displacement of the sacroiliac joint, often being able to demonstrate a palpable or even an audible click in the process. . . . The claim of the osteopath was found to be correct. . . ."

Dr. Goldthwait closes his remarks with the following: "If all of the features which have been presented in this symposium are considered, probably fewer of the cases will be operated upon and the treatment of these cases as a whole will represent a greater credit to our profession than they do at the present time."

In answer to this, we say that if rest and heat continues to be the accepted treatment on the part of the allopathic physicians for low-back conditions, the osteopathic profession will continue to enjoy a successful and prosperous practice in low-back cases because manipulative treatment is what the majority of these patients need for permanent recovery.

R.E.D.

INCREASED PREPROFESSIONAL REQUIREMENTS

During the annual convention, the Associated Colleges in their long and important and well-ordered sessions, agreed that for those entering approved osteopathic colleges in 1938 a minimum of one year of college work of approved grade would be required and for those entering in 1940 two years of such work would be required.

The steps which led to this decision are important as part of the history of the profession. It has been apparent for several years that the pressure to raise entrance requirements would sooner or later prevail. State laws were, in increasing numbers, demanding it. State boards of examiners so framed their questions as to give advantage to those with longer college training. Basic science boards were influential in that direction. It became fashionable in the profession and out of it to honor those with the longer educational qualifications. As new technics of diagnosis and treatment came into use, more and more of the time of the four year professional course was necessary for teaching those technics; less and less time remained for acquisition of the necessary basic sciences during the professional course.

In order to put in all the extra courses, the number of class hours per week in osteopathic schools was increased until it averaged higher than in schools giving the M.D. degree. As extra clinic work was added earlier in the professional courses, still more of the students' time was required in classes and less was available for quiet study. (This in spite of the fact that a relatively large proportion of time and attention to clinics has always been the rule in osteopathic colleges.)

In order to free more time for these technical subjects some of the preparatory work in so-called basic science is to be relegated to the preparatory college course.

The validity of a system which gives state boards of examiners a dictatorial control over the type of education of physicians may have been expedient, but as a principle of education it leaves a great deal to be desired. Politically appointed examining board members, effective and honest as some of them are, can by no means be expected to know as much of the administration of higher education as do properly trained faculties and college administration personnel.

That the studied effort of old-school physicians to cut down the number of physicians has had its effect in increasing the difficulties of obtaining an education and a license to practice is undeniable. But we must not lend ourselves to the erroneous conclusion that such short-sighted policy, however strongly it exists, is alone responsible for the present trend in medical education. Probably the small part of society which really gives the matter a thought and expresses its conclusions by the type of physician employed, or more remotely and less noticeably by the laws it allows to find a place on the statute books—probably that small group takes the position that since "there are too many doctors," the time has come to select only "the cream of the crop." Though the public has at long last no very good way of determining who is the best doctor, the dictum that the best doctor is the one who went to school longest, fallacious as it is, becomes more and more an accepted opinion.

But the intent has been expressed within the profession to take this step in educational requirements and a very definitely large majority believe it to be a forward step, one that will insure better osteopathic service. The majority exists among those who believe osteopathic practice should be confined to a superb type of manipulative therapy, among those who believe that osteopathic education should prepare the best possible general practitioner, well prepared to continue into any of the specialties, and among those who hold every variety of opinion in between.

The Bureau of Professional Education and Colleges of the Association recommended the new standard; the Board of Trustees and the House of Delegates supported the movement (this House being, not too incidentally, the most completely repre-

5. McConnell, Carl P.: The Practice of Osteopathy. W. B. Conkey Co., Chicago, 1899, page 43.
6. Hazzard, Charles: Principles of Osteopathy. Ed. 3. The Journal Printing Co., Kirksville, Mo., 1899, page 188.
7. Ely, Leonard W.: Dislocations of the Pelvis and Coccyx. The Cyclopedia of Medicine, Volume IV, F. A. Davis Co., Philadelphia, 1933, page 707.

sentative House that ever sat for the profession). There was no dissenting voice in the Associated Colleges of Osteopathy. The Legislative Council, previously pledged and loyally and effectively working in the past under the old standards, now agreed to the change. The only dissenting voices, and they were few, in the House of Delegates were among that loyal and dependable few who believe that this course may, temporarily at least, decrease student enrollment. They objected on the grounds that since presently educated osteopathic physicians are offering a better grade of service than is the M.D. graduated today, it would be wrong to cut down student enrollment even for a little while.

Which leads to the point of this article, if indeed it has a point other than to recite information.

A very considerable proportion of those already enrolled in approved osteopathic colleges have had the preliminary educational qualifications now to be required. Some of the accredited colleges have previously set this minimum standard and have put it into operation. They have prepared themselves, anticipated the possible diminution in enrollment and given future applicants an opportunity to prepare themselves. In some instances they have engaged with state licensing authorities properly to prepare their students under the standards set down by state laws or examining board rulings.

But we remember that another considerable proportion of the present undergraduate body is made up of those who could not have met, when they entered, the standard now to be set up and that therefore it is entirely within the range of probability that many who would enter osteopathic schools in 1938-39-40 et cetera, if the old requirement still existed, will be prevented from entering or be delayed in doing so.

In order to offset that possible drop we must, all of us, see to it that any prospective students realize the situation and we must encourage and aid them to make the necessary preparation. If, as has always been asserted by the colleges, individual osteopathic physicians, by example and friendly advice, are responsible for the largest number of matriculations, then the duty devolves upon that group of seeking out the best fitted, who already have taken or who have mental and financial ability to take the required preosteopathic college work, and showing to those promising students the desirability of an osteopathic education.

But it is plain that mass education of suitable students can also be most effective. We can, as a profession, working through accepted and understood channels of expression, offer to an intelligent group, the opportunity of an osteopathic education. We can do those possible students the favor of steering them into an uncrowded profession where the opportunities for service to man are unlimited and unsurpassed. We can at the same time provide, as we have in the past, a steadily increasing number of competent, useful osteopathic physicians who can be depended upon to give the public that needs it all that we presently know of osteopathy and all that we can by hard study and experience learn about osteopathy in the future.

It is important that osteopathy shall progress more rapidly today than ever. Not all change is progress, but there is no practicing osteopathic physician so lowly that he or she cannot successfully help to fill the entering classes in all the approved osteopathic schools this year and every year to follow, and none so high or influential that he could or would evade his obvious duty to afford an opportunity for fullest development to some intelligent young man or woman.

R. C. Mc.

VENEREAL DISEASE AND LEGISLATION

Neither crime nor disease can be legislated out of our body politic. Legislation is all right as far as it goes, but education is of supreme importance. A grim reminder of this truth is the fact that June broke all records for the issuance of marriage licenses in Chicago, and not one was issued in Cook County on July 1, the day the new law went into effect, requiring all applicants for marriage licenses to present certificates of freedom from venereal disease.

Social hygiene reformers are likely to believe that the passage of such a law will solve the problem. They forget that another group of reformers a score of years ago believed that the enactment of a national prohibition law would solve other problems. That legislation undertook to do the work which education should have done, and without the support of adequate educational measures. The final result has been that reform in connection with the use of alcohol is set back many years.

Too many people, young and old, look upon such legislation as that just enacted in Illinois as simply a sordid insinuation against decent youth. They seem to see something utterly incongruous in the picture of a blushing bride walking down the aisle of a church with a bouquet of roses in one hand and in the other a certificate showing her freedom from conditions which, through all her years, she has been taught must not be mentioned.

It should be no more necessary for the law to demand a certificate of freedom from syphilis than for it to require proof of freedom from tuberculosis or insanity. Such a law, if it is to do good, must be backed by such a campaign of public education as no state has yet put on. Otherwise, it will lead inevitably to the bootlegging of certificates having no value whatever, and in too many cases it will create a false sense of security whereas the proper type of education, a rather encouraging amount of which has been done, has been instilling a healthy fear, and constructive measures of precaution.

Syphilis and gonorrhea, it is true, often are contracted in the state of matrimony and are transmitted to innocent offspring, but the ultimate source of both of them, in an overwhelming majority of cases, is outside of matrimony, and here is where regulation is called for.

In all strata of society and at all ages, education must go on to the end that these scourges of mankind are not acquired; that when they are acquired they are not transmitted to others; and that the victims undergo early, thorough, and lasting care and treatment. If people knew as much about these things as they do about smallpox and diphtheria, there would be little or no need for such a law as that enacted. And where such a measure does go on the statute books, there would not be the spectacle of a mad stampede to secure marriage licenses one day and an utter absence of applications for licenses the next.

Social disease is amenable to education just as crime is. At the best, legislation is a palliative. In too many cases, legislation partakes of the nature of noble experiments or products of mass hysteria.

A PROJECT IN OSTEOPATHIC RESEARCH

"There are county and local societies, luncheon clubs, and study groups with insufficient interest inherent in their programs to bring out worth-while attendance. A practical course of investigation of one small line of thought, with one person reporting on his observations at each meeting, should galvanize the groups into undreamed-of activity and at the same time serve humanity well."

These words, in May, 1936, concluded the fifth of a series of editorials appearing in these pages, headed, "Osteopathic Research Imperative." How many doctors there are, each undertaking to exhaust one small line of investigation, nobody knows. How many groups there may be, each carrying forward one line of study, we cannot tell.

The editorial just quoted appeared in the same number of THE JOURNAL with the third of a series of articles by Dr. Charlotte Weaver, on the subject of the cranial vertebrae. It is Dr. Weaver's belief, following years of extensive study, that there are three segments of the vertebral column above the atlas; that all of the morphological parts of a typical vertebra are present and identifiable in each of the three cranial vertebrae; that there are no bones cephalad to the atlas (either in the skull or the face) which are not identifiable as morphological units of some of the three cranial vertebrae; and further that joint lesions in this region have definite and sometimes terrible results in both the mental and the physical life of the individual.

The influence of such lesions on the hypophysis has a large part in Dr. Weaver's thinking. She is thoroughly confident that adequate study will convince any investigator that such results as were apparent in the pituitary body in connection with certain upper cervical lesions, as reported in this JOURNAL for September, are observed only in the presence of lesions of the articulations which exist between certain of the morphological units of the cranial vertebrae and that these could have been found if proper search had been made in the cases described.

Dr. Weaver has long been proceeding along the lines laid down by those who organized the Section on Osteopathic Manipulative Therapeutics at the time of the Chicago convention, in that she has made certain observations, has studied their implications, and is attempting, as Dr. Northup expresses it, "to get that discovery into permanent record and available to the coming generations of osteopathic students."

For one year Dr. Weaver has been conducting weekly clinics with a group of earnest students in the osteopathic profession of Akron and surrounding towns. On the anniversary of its beginning, this class, on September 15, held a meeting whose significance only the future can make known. Each of eight men took one phase of the subject with which their work for the year has dealt, and presented a twenty-minute paper. Then Dr. Weaver summed up the proceedings. Afterward a number of clinic cases were presented and discussed. Osteopathic physicians from Kentucky, Michigan, and Pennsylvania, as well as from many parts of Ohio attended, including representatives sent by the board of trustees of the state society. It is planned that on September 15 and 16, 1938, another such meeting will be held, to be followed annually by still others.

Dr. Weaver has presented her beliefs and some of the evidences for them before osteopathic colleges and osteopathic conventions. A committee appointed by the American Osteopathic Association made some study of her work. However, very few persons have gone far in following her line of thought, and it is probable that most all of these are included in the little group which, Tuesday by Tuesday, for a year, in spite of weather or emergency, has come together in her clinic.

Considerable interest has been expressed by those who have studied the four articles which have so far appeared in her series in this JOURNAL. They will be glad to know that it is planned now to publish, in the coming months, most or all of the papers which were presented on the program at Akron on September 15.

A CINCINNATI DRAWING CARD

Dr. Carl P. McConnell reported, more than thirty years ago, on carefully controlled research looking to a better understanding of the principles and the practice of osteopathy. Laboratory studies since have gone far in the same direction. During all this time our best laboratory workers, as well as our leading clinicians, have insisted upon more and better clinical observations and reports, to complement (and more than complement) the laboratory findings.

Dr. McConnell had a great deal to do with inspiring the series of editorials, "Osteopathic Research Imperative," which ran in these columns early in 1936, and which followed two similar editorials of

March and April, 1933, in all of which intensive clinical osteopathic research was urged.

More recently, Dr. T. L. Northup has plead for clinical research in these words: "The confusion caused by reflex manifestations noted in our practice should lead a group of the profession to devote their attention and study to this problem. Clinical findings that seem to conflict with the expected reflex manifestations in a given condition are frequent occurrences in the practice of every osteopathic physician.

"Every now and then some member of our profession announces that he has discovered some new 'center' for the treatment of some certain condition, or has developed some type of soft tissue manipulation that the more learned ones of our profession are inclined to deride as visionary. It seems that if those of us who have had some of these experiences would get together and exchange ideas and go about it in a systematic way to find the solution of some of our problems, we could accomplish much for our profession.

"We certainly would need the help of our colleges as a scientific check but more than all we need the combined experiences of a good number of the members of the profession who have been alert to these reactions. If those who are interested in this subject will write me their ideas we will try to arrange a meeting at the time of the convention in Chicago. To get the most out of our manipulative treatment and to improve our accuracy of diagnosis, let us study reflexes."

So a meeting was held at Chicago and the Section on Osteopathic Manipulative Therapeutics was formed, with Drs. McConnell and Northup as chairman and secretary. Dr. McConnell says:

"I believe the section on Manipulative Therapeutics will be well worth-while to the whole profession. Unquestionably there is much enthusiasm, on the part of a fair number of seasoned practitioners, which if carefully directed should prove very helpful to every member.

"As I see it, it is important to collect, analyze, and interpret manipulative data, clinically, which is obvious, but also to bear down on what may be termed the osteopathic approach. That is, strive to make the profession more structure conscious as to both structural detail and the unified activity of the whole organism.

"In other words, stressing the importance of the wealth of manipulative detail, its physiological and biological significance, is certain to make better practitioners. Add to this the undoubted facts that there is no antithesis between structure and function; that the activeness and transformation of the energy units depend upon the character of the structural systems and their interrelationships; and that function is always expressed in accordance with the differentiation of the specialized groups of cells. Organization is the fundamental concept, not only upon which function depends, but also upon which manipulative therapeutics depends. I feel that structural organization, its systems and interrelationships, is of far greater moment than any of us realize; in fact, it is the basis of every chemical activity of the organism. As I interpret it, this is the trend of modern science; and our profession certainly occupies a front seat."

A most interesting program is being prepared by this section, which will be one very attractive feature of the convention at Cincinnati, the week of July 11, 1938.

FOR A BETTER OSTEOPATHIC ROAD

Automobile roads are widened and straightened when traffic becomes more than they can bear. Such improvements rarely are undertaken simply with an eye to the future, but only after terrible overcrowding occurs.

The rule of waiting until circumstances compel action is not confined to road building. It characterizes every phase of human activity. It is natural, therefore, even though inconvenient, that it has marked every line of osteopathic endeavor.

The first osteopathic college put up a strange looking structure which still stands as a monument to the fact that the enrollment grew so fast the building could not keep up. Other colleges in early days also outstripped the plans of their founders. It was not only the size of the student bodies which kept crowding them. The profession and the public demanded longer courses, and more subjects, and better teaching facilities. And those in practice did not always remember what such improvements must depend upon. In short, the profession was sometimes long on demands and short on support, in its dealings with its schools. But osteopathic education has gone, and is going, forward.

The first osteopathic laws were made for conditions then existing, or at the most with a vision of a growth far short of what was so soon to come. Here, as in the educational field, self-denying men and women gave of their time and effort to the extreme limit, in doing work of a value far beyond computation. Yet too often those who were to profit most by these efforts complained about what was done, and in some cases even made it harder by their practice, to secure adequate laws and to get justice at the hands of boards and officials who had to do with the interpretation and administration of such laws. Despite these things, the legal standing of the profession advanced steadily, if somewhat slowly, until the advent of the deluge of social security laws and rules.

The first osteopathic organization was made largely of students—paying, according to Dr. Chiles, a dollar a year dues, electing a complete set of officers annually, probably without a glimmer of a thought of the size and power into which the American Osteopathic Association would develop even in five short years—to say nothing of forty.

The Association from the first gave service to individuals and to osteopathy, and soon much was

being accomplished in the way of professional relations, public relations, and legislative recognition. It is to be noted that when the organization began to give service, it simply *gave* it. Members were so few, and so new in osteopathy, that it would have been humanly impossible for them as members to pay for what they were getting. Their membership in the National Association cost them a dollar or two, and then five. If a man or woman worked through days to make a living, while working through other days and too many nights simply to serve, that was taken as a matter of course. Sometimes contributions paid some of the cash outlay of these workers, and perhaps for a little of their time. In short, the American Osteopathic Association *gave* service, and so did the state and district and local societies. They did not attempt to *sell* this service to its beneficiaries.

Thus the osteopathic profession has lived along. A few have sent the students which have fed the colleges and kept the profession growing. A few have gone to state capitals and to Washington and have secured the laws and regulations which have permitted all to practice. A few have served in such gruelling jobs as those of secretaries of divisional and local societies, keeping the books and the records, sending notices and bills and bulletins, attending all meetings and meanwhile listening to complaints day by day, that the profession might live. So we have gone for forty years. Let these statements not be misunderstood. To some extent we must continue to go on in the same way. No one ever has paid, or ever can pay, for the time of the founders and the great leaders of any such movement as osteopathy is.

But automobile roads are widened and straightened and sometimes elevated when the traffic becomes more than they can bear. Our own road has been patched in many places, and widened and straightened in some. No one can have watched osteopathy grow and advance through the last twenty years—ten years—five years—without being thrilled often with the way its educational, its legislative and its organizational work is being supported by an ever-increasing and ever more enlightened understanding. Not only are there more osteopathic physicians in practice today than ever before—the osteopathic physicians in practice today are better doctors than they ever were before. Those who graduated forty years ago had a foundation which any one might covet, and on that they have builded through the decades as human knowledge of anatomy, physiology, chemistry, and the arts of healing has grown. Those who graduated more recently have lacked some of the advantages of the pioneers, but in their place they have had the advantage of improved facilities and an increased store of knowledge.

But there are not enough in practice, and there are not enough in the organization, and there are not enough doing the work. Among those devoting all their time to practice there are not enough paying the expenses of those who do the profession's work, and those who do contribute to the expenses well may look to their budget and decide to contribute more.

Osteopathy has made us what we are. The colleges have *given* us an education of a value far in excess of what we paid. The public has *given* us legal recognition (perhaps not all we would ask, or all we deserve—but at least a license whose terms we knew when we accepted it) often as a result of great sacrifice on the part of our legislative workers. Our associations, national, divisional, district and local, have *given* us fellowship and support and protection and programs and publications and other things which cannot be numbered and whose value cannot be measured.

Costs of living are increasing. Costs of government are mounting. Costs of all kinds of association work are climbing. Local and divisional osteopathic societies are increasing their dues. Delegates representing the rank and file of the profession from coast to coast met in Chicago in July and by a more than two-thirds majority voted that beginning next year the American Osteopathic Association dues will go from $10 to $20. It is true that this was done partly with an eye to the future, but it was chiefly because it has been found impossible longer for the Association to give the greatly increased service it has been rendering at the old price of $10.

The American Osteopathic Association in 1918 was giving all the service that a small, hard-working employed force of three or four persons could give, and it had, as it always has had and always will have, devoted volunteer workers. Every phase of osteopathic associations work has been added to and multiplied and many new phases have been developed. As that has been done it was absolutely essential that the employed force be increased so that now, over against the three or four of twenty years ago there are, including those employed by the Public Relations Committee and by the Committee on Public and Professional Welfare, nearly or quite 30. THE JOURNAL of today is twice as big as that of 20 years ago. THE FORUM OF OSTEOPATHY has been added. The relations of the Association with the colleges and with legal and legislative work has been improved, enlarged and standardized. Service to the individual member in the way of guidance, and in his relations with public officials and insurance companies, opportunities for writing and for speaking has been multiplied many times. Membership privileges are worth many times what they were 20 years ago, but the dues have remained the same.

Automobile roads are widened, straightened and sometimes elevated when the traffic becomes more than they can bear. Work on our road has grown beyond what it can bear at $10 a year. Next year it will be $20. Those who have not paid the current year's dues should understand that they are still $10. The American Osteopathic Association works on a budget. Its members conduct their financial affairs on individual budgets. It is eight months from the date of this JOURNAL until the date when the $20 rate

goes into effect. Ten cents a day—60 cents a week—$2.50 a month—take your choice. Any one of them from now until the end of the fiscal year will pay your dues when that time comes, with something left over. If the money is put away regularly in an envelope or a box in your desk or on your mantle, there will be no jolt when that day comes.

INFANTILE PARALYSIS AND ALLOPATHIC PROPAGANDA

Infantile paralysis has been more than usually prevalent this summer. In Chicago, most of the cases have been in children between 5 and 15 years of age, and the Board of Health, under direction of the President, Herman N. Bundesen, M.D., ordered the grade schools to remain closed until the prevalence of the disease lessened.

Renewed interest in the fight against this scourge has brought less than the usual vicious warnings from the allopathic propagandists that infantile paralysis victims should not be manipulated, even for months after the abatement of acute symptoms. Chicago newspapers of September 22 published nine "rules," laid down by a dozen of the city's leading orthopedic surgeons, of which Dr. Bundesen said significantly: "The agreement of these specialists on a definite course of treatment will be of incalculable aid to many of the city's 6,000 physicians who have had limited experience with the disease." (That was putting it mildly.) The "definite course of treatment," when examined carefully, consisted only of "complete rest in bed" and "immediate support of paralyzed muscles." All the rest of the rules were don'ts. It is interesting to note that there was no reference to vaccines or serums, or to nasal sprays. There was nothing to encourage the idea so commonly expressed that the ordinary doctors have some treatment which is definitely helpful.

Of vital importance was the advice to "avoid all unnecessary movements." Equally important was the statement that expert physical therapy treatment (of course "under the direction of the doctor") should be provided "when the proper time arrives."

These twelve physicians, personifying organized allopathy, stopped far short of the warnings against manipulation which have marked most recent pronouncements on the subject, and seemed even to recognize its value—but, naturally, to undertake to monopolize its use.

It is the same old story—an epidemic (real or alleged), a frightened public, and organized allopathy attempting to herd the people into its offices. But the usual ridiculous warnings against competitors' methods, deceitfully implying that osteopathic physicians treat the helpless little patients who are stricken with infantile paralysis in anything but a gentle manner, were replaced with much more subtle words. Such propaganda must be overcome, whether it take the form of the old malicious attempts to discredit our profession and its methods by name, or the more modern form of inviting the victims to take their physical therapy at the hands of the anointed. OSTEOPATHIC HEALTH and OSTEOPATHIC MAGAZINE are admirably fitted to do this work. OSTEOPATHIC HEALTH No. 95 takes up the subject of infantile paralysis in its lead article. It is carefully written; it brings to the reader a clear conception of osteopathic care in this disease and the reasons underlying our treatment. Your patients need to know that osteopathic physicians treat infantile paralysis victims and that remarkable results have been secured in many instances in both acute and chronic cases.

There is much to be learned about the etiology of this disease before preventive measures that are reliable can be prescribed. A few years ago a vaccine was heralded as a means of protection against the development of poliomyelitis. This was used quite extensively in some parts of the country. Then a warning came from the Medical Director of the U. S. Public Health Service (December, 1935)[1] that inoculation with this vaccine was dangerous because its use in numerous instances had been followed by the disease itself. But scientists and commercially interested laboratory workers in large drug houses keep on trying to find a vaccine that will work and yet be harmless. In the *Journal of Immunology* for May, 1937, there is an article telling of the successful immunization of monkeys with ricinoleated vaccine.[2] Again we wonder whether later research with this new substance will prove that it is as dangerous as the old vaccine.

Among the latest experiments along preventive lines are those conducted by Charles Armstrong and W. T. Harrison of the U. S. Public Health Service.[3] These two scientists undertook to build up the resistance of the nasal mucous membranes of monkeys by spraying them with various chemicals, such as solutions of alum, zinc sulphate, and picric acid. They seem to have succeeded to the extent that these animals did not acquire poliomyelitis when the virus was instilled in the nose. Its applicability to human beings had not been tried extensively up to the time of the present epidemic. Stations are now established in Chicago, and in other cities of the U. S. and Canada threatened with a polio epidemic, where children and adults may go to have their noses and throats sprayed with such solutions as a preventive measure against infantile paralysis. The results of this kind of prophylaxis are yet to be evaluated.

The use of convalescent serum in the treatment of infantile paralysis is still a moot question. Toomey, writing in the *Journal of the A.M.A.* for August 7, says "At present there is no evidence of a controlled nature that convalescent poliomyelitis human serum has any value in the treatment of the disease. Certainly there is no reason why it should be given to exposed persons. There is likewise no controlled

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1. Leake, J. P.: Poliomyelitis Following Vaccination Against This Disease. Jour. Am. Med. Assn., 1935 (Dec. 28) 105:2152.

2. Kolmer, J. A.: Active Immunization Against Acute Anterior Poliomyelitis with Ricinoleated Vaccine. Jour. Immunol., 1937 (May) 32:341-356.

3. Armstrong, Charles, and Harrison, W. T.: Public Health Reports for May 31, 1935 and August 14, 1936, reviewed in Jour. Am. Osteo. Assn., 1936 (Jan.) 35:263 and (Nov.) 36:161 respectively.

evidence that convalescent serum will abort an attack of poliomyelitis."[4]

The treatment phase of infantile paralysis was discussed at length by James M. Watson, D.O., in THE JOURNAL OF THE A.O.A. for February, 1937.[5] Dr. Watson concluded that "Osteopathic manipulation exerts a definitely beneficial influence, particularly in prophylaxis and in the acute and convalescent stages, after the period of hyperesthesia has been passed." He says further: "Avoidance of fatigue and proper diet with especially adequate vitamin intake have been held responsible for Los Angeles County Osteopathic Hospital attendants not developing the disease" (while in 1934 over 100 cases occurred among the attendants in the Los Angeles County General Hospital—the allopathic unit).[6]

Edward S. Merrill, D.O., in his article in the same number of the A.O.A. JOURNAL[7] delved into osteopathic literature and found that the treatment of infantile paralysis by osteopathic methods was mentioned as far back as 1899. He listed numerous case reports, many of them of patients who had been treated unsuccessfully by old-school medicine.

In the face of these reports and the successful experience of osteopathic physicians today in the care of this disease, we must not let organized allopathy continue to warn the public against the use of osteopathy in infantile paralysis, without some sort of a battle. The machinery has been set up and is functioning for combating such misrepresentations. It is known as the Committee on Public and Professional Welfare. It needs your financial support to keep the fight before the public.

R.E.D.

THE SWING OF THE PENDULUM

We believe that osteopathic manipulative care for certain types of industrial injuries is a proper and logical and more or less indispensable procedure.

We believe that such care should be available for every injured worker, that he should be able to exercise a degree of "freedom of choice" with respect to his treatment and his physician, and that where necessary to insure this, the laws and regulations governing the administration of Workmen's Compensation Acts should be altered, and a different set of precedents set up.

We believe that such freedom of choice with respect to the treatment of low-back injuries and certain other conditions would result not only in better care of the injured, but also in substantial money savings for the insurance carriers. It is our duty, therefore, to bring our reasons for this belief to the attention of all concerned. These include labor leaders, workers both in and out of organized unions, employers' organizations, employers as individuals, compensation commissioners (who are state officials charged with a definite responsibility to the injured), insurance executives and insurance workers generally.

No time was ever more favorable for such an educational effort than the present. Difficult conditions of the past few years have focused public attention as never before on the narrow margin of safety under which millions of workers and their dependents live. The swing of the pendulum of public opinion is now definitely in the direction of more liberal provision and greater advantages and security for these workers.

The advantages of osteopathic care for the wounds of industry will not be included within the limits of this swing of the pendulum except by the efforts of organized osteopathy.

E. P. MALONE.

NEW EDITOR FOR THE JOURNAL OF OSTEOPATHY

Dr. H. E. Litton, faculty member of Kirksville College, Editor of *The Journal of Osteopathy*, secretary-treasurer of the Missouri Association of Osteopathic Physicians and Surgeons, and editor of its *Co-Operation*, resigned these positions and on September 1 joined the faculty of the College of Osteopathic Physicians and Surgeons, Los Angeles, as Associate Professor of Technic.

Dr. Litton became Editor of osteopathy's oldest periodical in December, 1924. His editorship was interrupted in 1928 when he went into practice in Nebraska. In 1930 he returned to Kirksville and has piloted *The Journal of Osteopathy* since that time. Thus both in continuous service as editor and also in total time on the staff, he is believed to have set records so far as that *Journal* is concerned.

His editorial work has been marked by numerous innovations and a consistently high standard. His editorial pages have stressed constantly the necessity for maintaining the fundamentals taught by Dr. Still. As professor of technic Dr. Litton has built up this most important department through the years to occupy a very prominent place in the curriculum. As secretary-treasurer of the Missouri state association and editor of the association's bulletin, he has contributed considerable effort and time for organized osteopathy. The recent passage of a re-registration law in Missouri was due in no small measure to his efforts. One of his most recent tasks was as Zone Chairman for the Committee on Public and Professional Welfare of the American Osteopathic Association.

The duties of the editorship of *The Journal of Osteopathy* have fallen upon William C. Cozad, formerly associate editor, who is entering his senior year at Kirksville College. He is a young man in his early twenties, and comes, with newspaper experience, from East Cleveland, Ohio.

4. Toomey, John A.: Active and Passive Immunity and Portal of Entry in Poliomyelitis. Jour. Am. Med. Assn., 1937 (Aug. 7) 109:402-406.

5. Watson, James M.: Treatment of Anterior Poliomyelitis. Jour. Am. Osteo. Assn., 1937 (Feb.) 36:266-272.

6. Pomeroy, J. L.: Public Health and Medical Coordination in Poliomyelitis Control. California and West. Med., 1935 (July) 43:13-18.

7. Merrill, Edward S.: History of Anterior Poliomyelitis. Jour. Am. Osteo. Assn., 1937 (Feb.) 36:259-262.

President Ward Calls for "Cleanup" Drive

A "cleanup" campaign to raise the remaining amount needed for the work of the Committee on Public and Professional Welfare has been inaugurated in response to a call by Dr. Ward, President of the American Osteopathic Association.

So far nearly one-half of the amount asked for has been pledged by less than one-fourth of the membership of the American Osteopathic Association. If the work of the Committee is to be fully effective, not only must all of these pledges be met in full, but the other members also must pledge their support.

In his open letter, Dr. Ward points out that the benefits to be derived from the work of the Committee are far-reaching, and will affect every member of the profession. When the campaign was first announced, there was an immediate response from far-seeing professional men, who have long realized that such an educational campaign must be inaugurated if the general public is to be taught the truths of osteopathy.

In the few weeks during which the campaign was prosecuted the pledges reached practically their present figure. Then the national convention shifted the attention of the profession in another direction. Many members went on vacation and naturally, for a time, were not thinking of work.

But now the convention is a thing of the past, the vacations are over, and it is high time that we once again turn our thoughts to the advancement of our profession. We cannot expect a few members to carry the burden that we all may benefit. An educational program, on a broad scale such as is being carried out by the Committee, and in which newspaper publicity is only one phase, is directed to the benefit of the entire profession, and must be supported by the entire profession, both by contributions and by moral support, if it is to succeed.

No funds will accrue to this committee or any other osteopathic activity as a result of increased dues in the American Osteopathic Association until the next fiscal year, which begins June 1. But the educational campaign is being carried on now, and it is up to us to see that funds are available for this long needed work.

Twenty-five years ago, in a message to the entire profession, Dr. James L. Holloway of Texas, then President of the American Osteopathic Association, said:

"Our ideals, like our lives, should grow. Satisfaction with what we have is the narcotic that benumbs our energies and paralyzes our aspirations. No man or institution can stand still. Stagnation spells death. It is a principle that operates in nature, society, government . . . Unity of action in an organized capacity alone makes us a profession. It is only as we move with elbows atouch and feel the thrill of a common, animating purpose . . . [that we can] hope to put osteopathy on a nation-wide, yea, a world-wide, basis of sympathy and support."

That far-reaching message is fitting and true of our situation today. It is only by acting as a profession, by looking to the good of the profession as a whole, that we can accomplish anything in our present educational program. Much has been done by the Committee, but much remains to be done.

Dr. Thomas R. Thorburn of New York City saw and recognized the need for this educational program, and as President of the Association, he set in motion the machinery to inaugurate the public and professional welfare program and to raise the funds needed. Yielding to insistent demands, Dr. Thorburn consented to head the Committee, and then to continue as its head. He will soon return from Europe, and Dr. Ward is anxious that when he returns, the fall renewal of the campaign will be in full swing. So in issuing his call for a cleanup campaign, Dr. Ward is asking us all to assume our portion of the burden. As each

Sept. 20, 1937

TO THE MEMBERS OF THE OSTEOPATHIC PROFESSION:

In the absence of Dr. Thomas R. Thorburn, chairman of the Committee on Public and Professional Welfare, who is in Europe, I am issuing a call that he would issue if he were here.

This Committee was organized to demonstrate the contributions of osteopathy to the world of science, and its worth to the art of healing, and to educate the general public by every ethical means to the truth about the profession. In order that we may accomplish this purpose, and that the fine work already being done may continue, the entire profession must get behind the Committee.

Our first call for contributions met with a fine response, and then, due to the national convention and the vacation season, it seemed better to take a recess.

Now we are calling for a cleanup campaign, one in which every member of the profession will pledge support and make his or her contribution to the work of the committee from which every individual will derive benefit. So far less than one-fourth of the members of the A.O.A. have recognized this need, and have pledged or given financial support, although the entire profession will benefit from its wholehearted support of the committee.

A preliminary report of the work of the committee has been mailed to all contributors, and to program chairmen of all societies. With the meetings of the state and local societies now going on, the program chairmen are asked to have these reports read at their next meetings, and to urge all members to get behind this cleanup campaign, and make their pledges, in order that the entire profession may be represented, and that the work of this committee can proceed. Zone and district chairmen who need additional supplies, letters, pledge cards, et cetera, may obtain them from Central office.

Fraternally,
(Signed) Edward A. Ward.

member will benefit, each member should contribute, at least some small part of the funds needed.

A preliminary report on the activities of the Committee has been mailed to all members of the profession who have pledged or paid their contributions. Additional copies have been mailed to program chairmen of state and local societies, with the request that the report be read at the next meeting of each group. Every member of the profession should make it a point to read or hear this report, and immediately to do his part to see that the educational program shall continue in full force.

In general the Committee has utilized every ethical medium for the dissemination of accurate educational material regarding the profession, and it is meeting with satisfactory results. Newspaper and magazine stories concerning the interesting and important activities of the members of the profession have been and are being sent out daily. Local societies have been afforded aid in the preparation of educational matter relative to their own conventions and meetings, and this aid is offered all such groups in the profession. In addition, radio scripts suitable for presentation on health programs, or in conjunction with society meetings, have been prepared and sent to divisional societies.

Through the medium of an editorial contact system newspaper editors throughout the country are being told the truth about osteopathy, and have been informed that accurate and truthful information will be supplied them at any time on request, by the American Osteopathic Association. Magazine and book publishers are being supplied with the same information. According to the response received by the Central office, this entire educational program is meeting with success as far as it has been able to go with the funds available.

To continue this program is now our job, and it is only by succeeding in the financial cleanup campaign called for by Dr. Ward that we can push that program to the limit. In order to continue as a profession we must act as a profession and not as individuals.

COMMITTEE ON SPECIAL MEMBERSHIP EFFORT

F. A. GORDON
Chairman
Marshalltown, Iowa

MEMBERSHIP STATUS

Present members who would contribute toward professional perpetuation and development, will interview nonmembers NOW. Under the law of averages, if every member would present the aims and needs of a larger and stronger Association to at least one nonmember before DIRECTORY deadline, October 20, 1,000 new members would be added. Those who represented your state in the House of Delegates at Chicago have lists of nonmembers and can assign to you those whom you should interview. THE FORUM for October contains the regulation application form. Put your name on applications received, for your own listing in the Honor Roll, as you forward results to 540 N. Michigan Ave., Chicago. Our growth will be in proportion to the efforts of our members.

Analysis of the net gain of 108 during August shows that more than 90 per cent were recently licensed graduates with applications previously on file.

MEMBERSHIP GAIN SINCE AUGUST 1, 1937

On September 1, 1937, twenty-three divisional societies registered net A.O.A. membership gains sufficient to offset slight losses existing in nine divisional societies, and to advance the total membership figure 2 per cent above the mark of August 1, 1937.

GROUP A (Societies of more than 200)	Per cent of gain on Sept. 1, 1937
California	7.72
Texas	4.34
Pennsylvania	3.41
Kansas	2.98
Missouri	2.75
New York	2.56
Michigan	2.26
New Jersey	1.92
Iowa	.97
Ohio	.33

GROUP B (Societies of 100-199)	Per cent of gain on Sept. 1, 1937
Florida	3.92
Indiana	3.70
Nebraska	2.70
Maine	1.72
Wisconsin	1.05

GROUP C (Societies of 50-99)	Per cent of gain on Sept. 1, 1937
South Dakota	3.12
Georgia	2.94
Oregon	2.43
Connecticut	1.81

GROUP D (Societies of less than 50)	Per cent of gain on Sept. 1, 1937
Wyoming	11.11
Idaho	4.34
New Mexico	2.64

Par membership obtained in Illinois, Minnesota, Washington, West Virginia, Montana, New Brunswick, Nevada, Utah, Vermont, Mississippi, Arizona, Delaware, New Hampshire, District of Columbia, Virginia, Louisiana, Hawaii, Kentucky, Maryland, North Carolina, South Carolina, Alberta, Manitoba, Ontario, Quebec, and Saskatchewan.

F.A.G.

Convention News

THE SPIRIT OF CINCINNATI

Cincinnati is a live city whose osteopathic population maintains 100 per cent membership in local, state and national associations. General Chairman J. Collin Kratz says the reason for this is found in the fact that "the older and better known osteopathic physicians help out the younger and less known among us." In that spirit of Cincinnati—the spirit of mutual helpfulness—the convention is being planned. Every member who attends will give something. Is it too much to say that the more each one gives the more he will receive, and that every one in attendance will take away more than he gives?

Drs. McCaughan and Clark from the Central office have already met with the Cincinnati Convention Committee, going over plans in general, and as far as possible in detail, from the standpoint of mechanical considerations.

Dr. R. McFarlane Tilley, Program Chairman, has made great headway in outlining his plans. The arrangement of general and sectional programs will be something of an innovation. Section programs as such will be eliminated from the morning hours. From 8:00 to 9:00 a.m. group breakfasts will be held with small discussion classes and clinical presentations. The general program will run from 9:00 to 12:00 and from 1:45 to 2:45 p.m. For each day's afternoon session it is planned to have a topic arranged to fill the entire hour. The section programs then will run from 3:00 to 6:00 p.m.

Outstanding, interesting, practical, these are the words which describe the men and women and their topics, thus far scheduled for those great days of inspiration and instruction.

CORRECTION IN TECHNIC SECTION OFFICERS

THE JOURNAL for August, page 565, contained the American Osteopathic Association Roster for 1937-1938. The following officers were elected: W. W. W. Pritchard, Chairman; C. Haddon Soden, Vice Chairman; M. C. Beilke, Secretary. The Chairman has found it impossible to accept.

Department of Professional Affairs

P. W. GIBSON
Chairman
Winfield, Kans.

BUREAU OF PROFESSIONAL EDUCATION AND COLLEGES

JOHN E. ROGERS
Chairman
Oshkosh, Wis.

PREPROFESSIONAL REQUIREMENTS*

CARLE H. PHINNEY, D.O., President
College of Osteopathic Physicians and Surgeons
Los Angeles

Last year at our meeting, the subject of "The Problem of Increased Preliminary Educational Requirements" was discussed. At that time your attention was called to the following points: that increased entrance requirements of two full years of college work will insure a superior type of matriculants, will release hours spent in teaching fundamental sciences for better professional training, will attract those preparing in premedical courses to enter professional life who are unable to secure matriculation in a medical college, will meet the general educational level attained by the youth of today and will call for adequate fitness and aptitude.

The function of a medical teaching institution is to fit its graduates to replace the vanishing practitioners in its profession, administer capable service to patients, and take their places in public health activities and community interests.

Dr. Works of Chicago says: "The real test of a medical school is the degree to which it has developed in its graduates the desirable qualities and the degree to which its graduates are indebted to it for such ability as they possess in fitting into the active life of the profession and in holding up their end of the work to be done."

The art of medicine requires the physician to enter into the lives of his patients. His training must produce a cultured person as well as a technician. He should not only have a technical training and a scientific critique, but also he should have such knowledge of sociological and economic questions and trends as to enable him to give advice in the personal and environmental problems of his patients. The physician must treat the man as well as his malady.

The medical college may provide, must provide, the technical part of the program and add the inspiration for its fulfillment, leaving to the secondary and higher educational institutions the duty of training prospective physicians in history and social sciences relative to human experience and in fundamental culture as well as in the basic sciences. Yet, the colleges must see that the cultural, social, and scientific foundation is well laid.

The college must, therefore, place the physician in a twofold position—as a professional adviser and as a social service guide in both the social and economic problems of his patient.

The tendency to raise preprofessional requirements grows out of the needs:

1. For a broad education on the part of those who practice our profession.

2. For a careful selection of those pursuing a professional course of study.

3. For the expansion of secondary education to include the freshman and sophomore years of college work.

The necessity of the evaluation of secondary training grows out of the diversity of courses offered by various schools in the same rank, in many of which the foundation in the sciences is meager and the students immature. A diploma does not indicate the nature of work done. Such is the need for standardized and well-planned preprofessional requirements.

*Delivered before a meeting of the Associated Colleges of Osteopathy during the Forty-First Annual Convention of the American Osteopathic Association at Chicago, July, 1937.

The first medical college in America was established in Mexico toward the end of the sixteenth century. In the United States, the enduring medical colleges were founded in the years 1768, 1783, 1791, 1798 and 1807. By the year 1910, there were 175 medical teaching institutions in America with indifferent entrance requirements and great overcrowding of the medical field.

From the early years mentioned above the boasted educational status of the medical profession received no effort at standardization until 1904, in which year the Council on Medical Education and Hospitals of the American Medical Association proposed an "Ideal Standard" in which one year of college work was suggested, this requirement to call for eight semester hours each of physics, chemistry, and biology and six to eight semester hours of a foreign language. This standard was adopted by the Council in 1910 for all medical colleges seeking approval after January 1, 1914. In 1904, only twenty colleges had any educational requirements for entrance and only ten required high school graduation. No states required any college training preliminary to medical education, the courses in many schools aggregating only three years. In 1910 entrance requirements on the Pacific Coast called for high school graduation only. The premedical requirement of two years of college work was advanced and adopted by the Council on Medical Education and Hospitals for all schools to be approved in 1918.

Of the sixty-seven colleges in the United States giving the M.D. degree at present, five require a premedical college degree, thirty-six require three years of college work, one requires four years of college work without a degree, three require three years of college work with an academic degree in absentia at the end of the first medical year, one requires one and one-half years of college work and the remaining twenty-four require two premedical years. Thirty-one of these colleges are departments of state institutions with practically unlimited resources for advancement and research. Of the thirty-six other colleges, many are heavily endowed institutions or are departments of heavily endowed universities.

The comparison between the M.D. colleges and our osteopathic schools, most of which have virtually lifted themselves by their bootstraps, is certainly significant in a discussion of the advance made by our profession in education and attainment.

The first osteopathic school was established in 1892; the second recognized school in 1896 with courses extending over two years of 10 months each, at a time when most M.D. schools required four years of six months each.

The first record of osteopathic preprofessional requirement dates back to 1900. The first legal requirement of one year of college work including physics, chemistry, and biology was enacted in 1920. In 1898 the Associated Colleges of Osteopathy, formed in that year, directed its efforts to the proper relations between the schools and the standardization of curricula and entrance requirements.

At this time [October, 1937] two osteopathic colleges require two years of college work preliminary to matriculation, two others will enforce the two year requirement beginning September, 1938, and the remaining two will go to one year preliminary requirement in 1938 and two in 1940 at the latest. This is decidedly encouraging, but the fact that osteopathic students may be matriculated with a high school graduation or its equivalent lends force to the assertion by the representatives of the allopathic profession that osteopathic graduates have not had adequate preprofessional training meriting recognition by educators.

Under the Carnegie Foundation for the Advancement of Teaching, Abraham Flexner made an extensive survey on Medical Education in the United States and Canada in 1909, which was published a year later. His criticisms of many nonosteopathic colleges and practically all the osteopathic colleges were very severe. He also made constructive suggestions. At present the osteopathic colleges can boast of having corrected these shortcomings while there are M.D.

colleges which, after twenty-eight years, would fall under some of the same criticism.

The plan of the Associated Colleges of Osteopathy is to establish an adequate standard of entrance into osteopathic colleges and an adequate curriculum which will attract the type of young people with the cultural background to insure the development of the profession and command the respect of educators everywhere.

The plan of the Association of American Medical Colleges aims not only at the standardization of premedical education but also at the rigid limitation of the matriculation of students in training for a profession already overcrowded.

For our colleges to advance too far in the elevation of preprofessional requirements may place them in the position of too greatly limiting the numbers necessary to satisfactory numerical matriculations for the development of both the schools and the profession. However, the educational standards should not be less than the general educational level, the increase in which is shown by the fact that in the last forty years, the number of graduates from higher educational and training schools has increased eight times as fast as the population.

A two year college preprofessional course in which sufficient basic science work, social sciences, history and English are required to lay an adequate foundation for the pursuit of a professional education, should be a reasonable standard for our colleges. Such a standard is in keeping with educational trends and will attract the attention of those now interested in premedical courses, only slightly more than one-half of whom have any chance of being matriculated in allopathic colleges.

The selection of students should be based upon individual qualifications, not merely on the length of courses, grades, or subjects. Our aim should be the selection of cultured individuals with such personal qualifications as temperament, human sympathy, insight, integrity, industry, judgment, resourcefulness, common sense, and with the proper attitude toward professional and public responsibilities.

1721 Griffin Ave.

Committee on Public and Professional Welfare

THOMAS R. THORBURN
Chairman
New York City

(See editorial on page 68)

Department of Public Affairs

A. G. CHAPPELL
Chairman
Jacksonville, Fla.

BUREAU OF PUBLIC HEALTH AND EDUCATION

FRANK F. JONES, D.O.
Chairman
Macon, Ga.

SCOPE OF BUREAU ACTIVITIES

While this is only a bureau, President Ward has so divided its activities that it becomes in effect almost a department. The activities we are trying to cover are:

Speakers Bureau, in charge of Dr. Grace R. McMains, Baltimore, who has about 700 on her list and is prepared to furnish speakers for both professional and lay gatherings.

Vocational Guidance, in charge of Dr. Mary Heist, Kitchener, Ont., who invites cooperation in encouraging young men and women to enter our schools.

Radio Contact, advisor Dr. E. W. Reichert, Chicago, who is undertaking to complete and bring up to date a list of practitioners who have appeared on radio, and especially those who have contacts with radio stations, artists, or executives. Please send him such information at your earliest convenience. His work will in no way infringe upon that of the Committee on Public and Professional Welfare, which is working on symposiums while Dr. Reichert is listing persons who can reach those in authority in radio.

Essay Contests, advisor Dr. A. G. Reed, Tulsa, Okla., an educator with experience with essay contests as they have been conducted in his state for some time. Dr. Reed hopes to cooperate with divisional societies and their members along this line of rousing public interest.

The Chairman will keep in touch with these activities and in addition will endeavor to stimulate interest in the distribution of educational matter to libraries and to the general public.

We earnestly ask you to encourage the use of OSTEOPATHIC MAGAZINE. Its extensive use on a regular subscription basis among friends, patients, and prospective patients would go far toward solving our problem of lay education.

COMMITTEE ON VOCATIONAL GUIDANCE

MARY L. HEIST
Chairman
Kitchener, Ont.

HOW THE PHYSICIAN MAY HELP

Osteopathy's way to scientific development, service to humanity, and needed legislation, is through greatly increased numbers of practitioners, via student recruiting.

In the United States there is one osteopathic physician to every 14,000 population. In Canada, one to every 100,000 population. In the rest of the world there are 111 osteopathic physicians. Truly ours is an uncrowded profession.

At this writing, osteopathic college enrollment promises a considerable increase over last year. It is time now to begin work for 1938.

The most effective student recruiting is done by individual osteopathic physicians:

(1) by educating the public with osteopathic literature,

(2) by accepting every opportunity to speak before local groups,

(3) by arranging for speakers for local vocational guidance groups,

(4) by arranging essay contests in local schools and colleges,

(5) by introducing students from osteopathic colleges to local young people,

(6) by follow-up work with young people who seem interested in osteopathy as a profession,

(7) by sending lists of high school and college students to the colleges,

(8) by educating vocational guidance directors to the advantages of osteopathy as a profession,

(9) by placing advertisements in high school and college journals, featuring osteopathy as a profession.

(10) by buying and using student loan fund seals and urging others to do so,

(11) by helping graduates to locate, even welcoming them to our own particular field of labor. Each recruit increases the number of osteopathy's friends.

The colleges will gladly send catalogs and other literature to lists of prospects, and they will furnish just as gladly speakers to give talks to groups of students. If you have problems or plans for this work, will you write to the deans of the colleges and to the chairman of this committee? The least we can do is to send one student each to an osteopathic college every year.

M.L.H.

BUREAU OF INDUSTRIAL AND INSTITUTIONAL SERVICE

R. H. PETERSON
Chairman
Wichita Falls, Tex.

ATTENTION: STATE CHAIRMEN

The Bureau is working to further the participation of the profession in many fields of work; such as caring for the health of workers in industrial plants, serving as examiners in schools, in boys and girls camps and organizations, and for insurance companies, doing public health work, and particularly in caring for cases under the Workmen's Compensation Laws. The plan includes local, district and state conferences with employers and insurance carriers to acquaint them with our service. It urges personal contact with industrial commissions to explain the value of osteopathic service in compensation cases. The education of labor leaders and organizers is an important phase of the work.

Divisional society chairmen should become familiar with the compensation laws of their respective states, that they may be able to advise their members. Controversies over professional recognition or payments should be settled by state chairmen, whenever possible, but this Bureau will aid by advising as to successful methods of approach used in other states, or by contacting executive or home offices of employer, corporation, or insurance company when located without the state. It is necessary that full detailed information, with names, dates, copies of correspondence, and all pertinent facts, be furnished in order to secure effective presentation.

Your cooperation in securing case reports of industrial compensation cases, especially back injuries, is requested. Report blanks sufficient to supply each member in your state may be had from the writer. We need several thousand more case reports.

J. J. McCormack, D.O.
720 New York Ave.,
Sheboygan, Wis.

(See also editorials on pp. 60 and 67, and Legal and Legislative, Florida, next column.)

LEGAL AND LEGISLATIVE

WALTER E. BAILEY
St. Louis
Legislative Adviser in State Affairs

HOW MEMBERS OF STATE BOARDS CAN HELP THE NATIONAL BOARD

Among the numerous agencies which can help carry out our legislative program, none are more important than the state examining boards. These may or may not be composed only of osteopathic physicians and surgeons. But each state board is a part of the political machine, even though its members may be equally divided between the major political parties. The member is a political appointee, usually a conscientious and accredited member of state and national associations. He is usually in close contact with other bureaus and the administrative offices of the state, which gives him an opportunity to protect the interests of his profession, while fulfilling his duties to the state. There are many differences in laws and board rulings pertaining to the healing arts. There are different legislative enactments which make it difficult for a qualified practitioner to move from one state to another without being subjected to almost impossible restrictions.

One object of the National Board of Examiners for Osteopathic Physicians and Surgeons is to give members of our profession a certificate which might safely be accepted by the board of any state. This, it would seem, should allow reciprocity between states recognizing these certificates, on the same basis as is now done between state boards with equal requirements. The osteopathic profession would be benefited and the purpose of state health laws served, if the legislative chairman of each state where a board ruling is not sufficient, would cooperate with the National Board by securing the passage of such amendments to the practice laws in his state as would recognize these certificates.

W. E. B.

REREGISTRATION OF OSTEOPATHIC LICENSES

November 1—Missouri, $2.00. For further details, see State Boards on page 80.

CONNECTICUT

A law was enacted in Connecticut this year providing that no one may use x-ray or radium in treatment "unless he shall hold a license to practice medicine and surgery or a license to practice osteopathy . . . unless . . . under . . supervision of a licensed physician, surgeon, osteopath . . ."

Because of the attorney general's ruling which barred osteopathic physicians from issuing health certificates required for marriage licenses (Jour. A.O.A., July, 1937, p. 532) a law was enacted providing that the term "licensed physician" in that connection "shall be construed to include a licensed osteopathic physician."

FLORIDA WORKMEN'S COMPENSATION

Until early 1937 Section 13 (a) of the Florida Workmen's Compensation Act read, in part, as follows: "The employer shall furnish medical, surgical and other attendance or remedial treatment, nursing and hospital services, medicine, crutches, and apparatus for such period as the nature of the injury or the process of recovery may require . . ."

In a ruling on this section the Florida Industrial Commission said: "The intention of the legislature with reference to medical or surgical treatment is further indicated in Section 25 (g) where it instructs the Commission clearly that examinations of injured employees claiming compensation shall be done 'by a duly qualified physician.' The word 'qualified,' when embodied in such a legislative act, connotes conformity to some prevailing standard, accepted in Florida as those persons who have completed a prescribed course of study and have passed an examination by the State Board of Medical Examiners, and have been duly licensed to practice medicine. . . .

"Services of persons other than qualified physicians and surgeons to be recognized by the Industrial Commission on compensation cases must be performed under the supervision of a qualified physician or surgeon. While the term 'remedial treatment,' if used without limitation, may be susceptible of a broad construction, the Act clearly indicates that those words, as therein used, are restricted to medical assistance rendered by the physician or under his direction and control. . . ."

On January 26, 1937, the attorney general rendered an opinion, saying: ". . . the legislature did not intend to prescribe any definite method of treatment to the exclusion of all others. The legislature did, however, provide the proper safeguard. Section 13 (b) reads as follows: 'The Industrial Commission may at any time, for good cause shown it, in its discretion order a change in such medical remedial attention.'"

Commenting upon Section 25 (g) which the Industrial Commission quoted in its ruling, the attorney general said: "It is clear that [it] applies only to a physical examination to determine the extent of the disability and does not apply in any way to the type of treatment to be given an injured person. The Industrial Commission does have the right to designate the physician to make this examination. . . . This statutory provision is . . . entirely separate and apart from Section 13 (a) . . ."

The 1937 session of the legislature amended Section 13 (a), quoted above, to read as follows: "The employer shall furnish such medical, surgical, and other attendance or remedial treatment under the direction and supervision of a qualified physician or surgeon, nurse and hospital service,

medicine, crutches, artificial members, and apparatus for such period as the nature of the injury or the process of recovery may require."

The legislature seems to have added Section 13 (d) reading in part as follows: "If an injured employee objects within twenty-four (24) hours to the medical attendance furnished by the employer, it shall be the duty of the employer to select another physician to treat the injured employee unless within the second twenty-four (24) hours the Commission determines that a change in medical attendance is not for the best interests of the injured employee. It shall be unlawful for any employer or representative of any insurance company or insurer to coerce or attempt to coerce a sick or injured employee in the selection of a physician or surgeon or other attendance or remedial treatment, nursing or hospital care, or any other service that the sick or injured employee may require . . ."

KANSAS

The collector of internal revenue at Wichita refused to issue or reissue narcotic drug permits to osteopathic physicians in Kansas because an assistant attorney general interpreted state laws as disqualifying them from the use of narcotic drugs. An injunction was obtained in the federal district court on June 29, instructing him to issue them.

A suit has been filed in the supreme court of Kansas against Dr. B. L. Gleason, Larned, charging him with the practice of medicine without a license on the grounds that he is practicing surgery in connection with his hospital.

MISSOURI

Reregistration Law: Osteopathic physicians holding licenses to practice in Missouri are required by the new law to reregister their licenses with the state board on or before November 1 of each year with the payment of a $2.00 fee. The secretary of the board is Dr. Leon B. Lake, Jefferson City, Mo. A statement of the requirements will be found under the head of State Boards on page 80 of this number of THE JOURNAL.

The Model Narcotic Act was amended as follows: "Hospital means an institution for the care and treatment of the sick and injured, approved by the State Board of Health if operated by and for medical physicians or by the State Board of Osteopathic Registration and Examination if operated by and for osteopathic physicians, as proper to be entrusted with the custody of narcotic drugs and the professional use of narcotic drugs under the direction of a physician, dentist, or veterinarian."

PENNSYLVANIA

It will be required after July 1, 1941, that applicants for licenses must have had not less than two years of college credits including one year each in chemistry, biology and physics, all of which must have been received before admission to osteopathic study. Licenses may be revoked for many causes, including misrepresentation, unethical conduct, or misleading or fraudulent advertising as determined by the board. The word osteopathy is made to include ophthalmology, subject to provisions of the act relating to major surgery. The provision relating to making reports and certificates was clarified. For a license to practice operative surgery applicants must have had, in addition, one year of surgical training in some legally incorporated reputable osteopathic college, or service for a period of not less than five years as an intern or assistant surgeon in any hospital approved by the osteopathic surgeons examining board. The same standard for graduates in medicine shall be used for examination by the osteopathic surgeons examining board in the examination of osteopathic graduates for licenses to practice surgery. Reciprocity is provided in the case of osteopathic surgeons with the states where there is a board of surgical examiners separate from the osteopathic physicians examining boards. The reciprocity fee is $200. Each person licensed to practice operative surgery under the osteopathic law must reregister annually at a fee of $10 or such other as shall be fixed by the Department of Public Instruction.

Public Relations Committee

CHESTER D. SWOPE
Chairman
Washington, D. C.

FEDERAL MARIHUANA (CANNABIS INDICA) REGISTRATION

The Federal Marihuana Tax Act becomes effective October 1, 1937. No physician may dispense, prescribe, or administer marihuana (cannabis indica) unless prior to October 15 he has duly registered under the Federal Act and paid the Federal Tax of $1.00 a year. This is a special annual registration and tax and has no connection with that required under the Harrison Narcotic Law.

C. D. S.

American Osteopathic Society of Ophthalmology and Otolaryngology

DAVID S. COWHERD
President
Kansas City, Mo.

THE BRONCHOSCOPIC STUDY OF ASTHMA*

J. ERNEST LEUZINGER, D.O.
Philadelphia

Asthma is one of the most stubborn conditions that the general practitioner and the laryngologist have to deal with. It is difficult to cope with because many diseases manifest themselves by asthmatic symptoms, such as heart disease, hypertension, arteriosclerosis, chronic pulmonary tuberculosis, bronchiectasis, emphysema, fibrosis of the lung, bronchial foreign body, malignancy of the lung and bronchial tree, or any obstructing lesion that interferes with normal function of the lung and oxygenation of the blood.

Much can be said from the allergic standpoint of asthma; however, it is the author's opinion that if we have a normal mucous membrane in the nose, dust and other external irritations have no effect on this membrane.

Asthma has been classified by many authors according to its etiology into so-called intrinsic and extrinsic types. The extrinsic types are supposed to be caused by pollen of flowers, animal dander, dust from grain, ordiary house dust, and different types of food. It is interesting to note that the patients who are affected by dust and pollen are relieved of their symptoms by a change of their environment to high altitudes. It is also interesting to note that 36 per cent of all asthmatic patients are positive to some degree to house dust, while evidence often points to a respiratory infection rather than an exposure to dust as a cause of the attack. The treatment of ninety-five asthmatic persons with dust extracts produced good results in only 15 per cent. One patient who was sensitive to cat fur in the lowlands of England was not affected by cat fur in Switzerland. We wonder, then, whether those patients who are dust and pollen sensitive recover in higher altitudes and dryer climates because the upper respiratory tract generally improves over that experienced in lower altitudes.

Beckman[1] in his study of the reaction of allergic persons to different altitudes showed that in the adjustment to altitude the blood alkali of persons in Colorado is normally lower than in inhabitants of the seacoast. The condition is not acidotic but acapnial. The loss of carbon dioxide through the augmentation of respiration is compensated by excretion of the excess alkali left in the blood. As a result, the individual does not

*Delivered before the E.E.N.T. Section at the Forty-First Annual Convention of the American Osteopathic Association at Chicago, July, 1937.

become acidotic, but he does lose alkali. In other words, patients sent to the Rockies to obtain relief from asthma are sent there to undergo a depletion of the alkali reserve.

In the intrinsic type of asthma, an infection of the upper respiratory tract usually is present as a result of structural deviations of the septum and nasal spurs. Sinus infection is supposed to be one of the important causes of intrinsic asthma. However, the small percentage of patients who are relieved following operations upon sinuses is not at all encouraging. Sinus disease is, no doubt, an important factor in bronchial asthma, because the pus which is present in the nose gravitates sooner or later into the bronchial tree, and produces a secondary infectious bronchitis. Therefore, the treatment of the sinuses alone without the treatment locally of the bronchial tree often leaves an infectious bronchitis, which may be called asthma.

It is not my intention in this discussion of bronchial asthma to give the impression that bronchoscopic aspiration is a cure-all for bronchial asthma. However, in many cases of bronchial infection secondary to sinus infection, these patients are markedly relieved. Therefore, the intrinsic type of asthma, where upper respiratory infection is present or has been present, should have a bronchoscopic examination to determine the amount of infection present and the condition of the bronchial membrane.

It has been stated by many authorities that 50 per cent of asthmatic patients who are free from all other diseases are considered to be allergic. However, in my experience, many of the so-called allergic cases of asthma, after careful diagnosis, turned out to be cases of bronchiectasis, lung abscess, chronic purulent bronchitis and even bronchogenic cancer. These patients were supposed to be allergic. I should like to know what condition may be considered allergy. Does anyone know what allergy really is? It is supposed to be a condition dependent upon sensitiveness to different kinds of dust, animal dander, foods, etc. Some authors say that it is a vasomotor disturbance.

It is my opinion that if the circulation to the mucous membrane of the nose and nasopharynx is normal, and if the nasal structure is normal, allergy is not likely to be present. Of the cases that have come under my observation where serum treatment was used, very few showed any remarkable improvement. However, cases that were treated and studied bronchoscopically showed marked improvement for a long period, and in many of these cases, permanent relief was secured.

Much can be said for and against nasal operations. In Smith's[2] study of 291 cases of asthma, forty-four of which had nasal operations, thirty-one improved, and eight were entirely relieved of their symptoms. If these patients had had bronchoscopic study and bronchial treatment following the nasal work, the percentage of cures might have been higher.

The use of autogenous vaccine in bronchial asthma has been successful in some cases if the vaccine has been made from secretions secured directly from the bronchial tree. However, vaccine made from the nose and throat gives less encouraging results. Rackemann and Scully[3] reported 346 cases of asthma in which vaccines were used. They secured only temporary benefit in 74 per cent. It is a question in my mind whether any foreign protein given in the same way would not result in the same results as the autogenous vaccine.

It is my opinion that all cases presenting symptoms of bronchial asthma should have a very thorough study of the patient's general condition by the internist, and careful examination of the ear, nose and throat by the otolaryngologist, with x-ray of the sinuses, and possibly x-ray of the chest. I believe that x-ray of the chest, together with bronchoscopic examination, and the removal of a specimen of secretion for bacterial examination is very important in the study of bronchial asthma, and that this condition should not be considered a purely local one, but a symptomatic syndrome of some disease going on in the body. I may have been unfortunate in the cases that I observed, but I have found very few patients who were free of any type of nasal pathology. The so-called typical allergic cases which I examined, in most cases, presented deviation of the septum, spurs, polypoid tissue in the middle turbinate region, and infection of the nasal accessory sinuses. In another group, I find cases where nasal operations have been performed but in which a spur is still present far back in the nose, or a posterior thickening of the septum. In another group I find where nasal operations have been successfully carried out, but no treatment was given to the bronchial tree.

In closing this discussion, we must remember that the respiratory tract begins at the vestibule of the nose, and that any condition here or further on in the air tract may lower the resistance of the mucous membrane resulting in the production of mucus which gravitates into the bronchial tree, and the development of the asthmatic syndrome. Again I emphasize the necessity for a thorough study of the patient by the internist, roentgenologist, and laboratory diagnostician in arriving at a diagnosis of bronchial asthma. Last but not least, a careful and thorough inspection of the bronchial tree should be made and a careful, thorough and direct inspection of the bronchial and tracheal membrane to determine the type of process which is going on. It is encouraging to see the relief these patients receive from the removal of thick tenacious mucopurulent material from the bronchial tree.

4937 N. Mervine St.

REFERENCES

1. Beckman, Harry: Allergy and the Acid-Base Balance. Jour. Am. Med. Assn., 1930 (Nov.) 95:1582-1586.

2. Smith, William Orlando: Bronchial Asthma: Clinical Studies and Observations in Three Hundred and Fourteen Cases. Arch. Otolaryngol., 1932 (Feb.) 15:165-189.

3. Rackemann, Francis M., and Scully, M. A.: The Use of Vaccines in Asthma and Colds. New England Jour. Med., 1928 (Aug. 16) 199:314-319.

Hurd, Lee M.: Asthma in Relation to Nasal Sinusitis. Arch. Otolaryngol., 1933 (Apr.) 17:557-560.

Leuzinger, J. Ernest: Personal observations in clinics of otolaryngology and bronchoscopy at the Philadelphia College of Osteopathy.

Tobey, Harold G.: The Relation of the Nasal Sinuses to Asthma. Arch. Otolaryngol., 1931 (Dec.) 14:784-792.

American Osteopathic Society of Proctology

COLLIN BROOKE
President
St. Louis

THE RELATION OF PROCTOLOGY TO OSTEOPATHY

L. K. SHEPHERD, M.D., D.O.

[The following paper was written by Dr. Shepherd for presentation before the Proctology Section at the Forty-First Annual Convention of the American Osteopathic Association, Chicago. His untimely death, on June 24, prevented his appearance on the program.—Editor]

An osteopathic physician should have a thorough knowledge of the rectum and its diseases, and how to make a rectal examination. This cannot be done without the proper instruments and equipment. He should recognize pathology and know what symptomatology it may cause, both locally and reflexly. I make that statement from personal experience, after having practiced osteopathy many years without a thorough knowledge of proctology.

Proctology is an important branch of osteopathy, whose fundamental principle is to find the cause of disease and

remove it, whether in the colon and rectum, or as joint lesions or other causes of pathology.

A thorough examination sometimes cannot be made without the use of local anesthesia. I recently failed to do this and as a consequence my original fee did not cover other work which I found necessary later. An army officer came in, complaining of pain in the rectum. A digital examination and inspection with the Brinkerhoff revealed a bad case of hemorrhoids, which were bleeding. This patient wanted to know what the cost of my service was going to be, and paid me in advance. On the day of operation I did a divulsion, as I usually do in bad cases of hemorrhoids, and found high up, two very bad crypts and quite a large papilloma which, of course, had to be taken care of, and without any additional fee, since I did not find these conditions until after the rectum had been thoroughly anesthetized.

Rectal lesions cause functional disturbances that resemble organic diseases, and we must know how to differentiate between these and true organic disease.

Some reflex symptoms caused by organic lesions in the rectum are very hard to account for, but when the rectal pathology is removed and the reflex symptoms clear up, it stands to reason that the cause has been removed. As an example, I have in mind a woman past the menopause who had been a patient of mine over a number of years for various ailments. Among other things, she finally developed a general arthritis. One day she came in for diathermy treatment, and asked me to look at her rectum. She had never had any discomfort there until the day previous, when something protruded and was hurting her. Examination revealed a large thrombotic hemorrhoid, which I removed; then a thorough examination showed an extensive mass of internal hemorrhoids. I explained to her what I had found and proceeded to treat them by injection. After the hemorrhoids were entirely relieved, all other symptomatology cleared up, and I have never had to treat her for anything since. This is an example of an instance where I failed in not previously making a rectal examination, even though there was no symptomatology to suggest it.

I have in mind another woman who, after she had a fissure removed, told me that I had kept her from a divorce. She realized that her domestic troubles were due to an irritable state, which cleared up after removal of the fissure.

Another case was that of a nurse in an allopathic physician's office. She was in such pain and was so hysterical, she could not leave the office. I was called to see her and corrected a sacroiliac lesion which gave her relief immediately. A rectal examination, made after the correction had been repeated two or three times, revealed a fissure, although she had not complained of rectal pain, but pain in the back and legs so severe she could not stand. Removal of the fissure relieved all symptoms and the sacroiliac lesion did not recur.

Injection of hemorrhoids will sometimes relieve prostatic symptoms and certainly help in the treatment of an enlarged prostate.

Many cases of constipation can be relieved by rectal divulsion and the clearing up of any rectal pathology present. This will help the general practitioner in treating many systemic conditions which have as their origin autointoxication.

It must be borne in mind that coccygodynia and sphincteralgia are likely to confront us, and may be due to causes other than rectal pathology, such as a twisted coccyx, sacroiliac subluxation, or lesions of the lumbar spine. In women, rectal symptoms may be due to pathology of the uterus and cervix. In fact, many apparent rectal conditions may be relieved by adjusting a malpositioned uterus, especially a retroflexion where the uterus is pressing against the rectum.

It must be remembered also that lumbago and sciatica may be due to either rectal pathology or misplacement of the uterus. Some asthmatic conditions can be given partial relief by a divulsion of the rectum, thereby relieving spasm of the pelvic diaphragm. Infections of the rectum and colon must be recognized and treated as they arise.

In syphilitic lesions of the rectum, the skin tags that so commonly become hypertrophied about the anus, are reddened and rough, projecting like a cock's comb, and there is a crater within the margin of the ulcer. The exudate from the ulcer is serous rather than purulent. One of the reasons for the *apparent* rarity of syphilitic lesions about the anus may be the relative freedom from pain, and hence attention is not drawn to that part of the body. Otherwise, the lesion may resemble a fissure.

We should be able to diagnose megacolon and other extreme abnormalities, but of course these are cases for the hospital and are not suitable for ambulant proctology. Rectal stricture is a condition which must be handled with extreme caution.

Blood in the stool may be a symptom of carcinoma of the colon, rectum, or anus, as well as of diverticulitis, intussusception, polyposis, proctitis, hemorrhoids, fissures, etc. In making a rectal examination, one of the first things we must always have in mind is malignancy. The great majority of carcinomas can be reached by the examining finger, for they are located below the peritoneal floor. Such carcinomas are accessible through the anus by (*a*) surgical excision, (*b*) irradiation, and (*c*) electric coagulation.

The point that I have tried to stress in this paper is that every competent general practitioner should have a thorough working knowledge of proctology. My father, who was an allopathic physician, wrote to his personal friend, Dr. E. H. Pratt of Chicago, and asked him what he thought of osteopathy. The gist of Dr. Pratt's reply was that any man at the present time, and this was back in 1902, who had studied medicine without at least a thorough knowledge of osteopathy was at a great disadvantage, to say nothing of what his patients would suffer from his lack of that knowledge. That is about the way I feel now about the general practitioner who does not have a thorough knowledge of ambulant proctology.

Current Medical Literature

Abstracted by
H. C. WALLACE, D.O., Wichita, Kans.
Member Editorial Advisory Committee
American College of Osteopathic Surgeons

Evipal Anesthesia: A Clinical Study of 300 Cases

This is a report on 300 operations performed under intravenous evipal anesthesia at the Peter Bent Brigham and Beverly Hospitals. The authors, J. E. Dunphy, R. E. Alt, and W. A. Reiling, state that "in favorable cases, with the use of preoperative medication, deep anesthesia sufficient to dilate the rectum or open the abdomen can be obtained. By the fractional administration of the drug . . . full anesthesia can be maintained for an hour or longer. . . .

"In simple cases, where only 3 to 5 cc. of the drug are used, recovery is usually immediate and is remarkably free from unpleasant aftereffects. Occasionally, however, even with small doses, recovery may be prolonged. . . .

"Certain features of evipal anesthesia require particular emphasis. First, evipal possesses the disadvantage common to all intravenous drugs, that once administered, its action is irrevocable. This fact alone renders the fractional method of administration imperative. Moreover, this inherent danger of the intravenous route is increased by a great individual variation in the effective dose."

Another "impressive characteristic of evipal anesthesia is the tendency of the drug to cause a fall in blood pressure. . . .

"The drug is a definite respiratory depressant. This has been emphasized by all observers and unquestionably constitutes a real danger. . . .

"Nausea and vomiting are rare, occurring in 2 per cent of the series. Headache is not common; it occurred in 6 per cent of the patients. Postoperative excitement is occasionally encountered, particularly in alcoholics. . . . Pulmonary atelectasis occurred in 3 per cent.

"A postoperative complication of considerable importance is a state of amnesia. Five patients suffered from this condition for periods of 30 minutes to 12 hours after apparent complete recovery. This is a contraindication to the use of evipal on outpatients, unless they are to be hospitalized or special arrangements are made to care for them during their return home. In this series there have been no fatalities attributable to evipal anesthesia."

Some of the points stressed in the technic of evipal anesthesia are: "Breakfast is withheld from patients routinely. . . . For procedures of short duration, such as incision and drainage of a small abscess, no preliminary medication is given. For a longer operation . . . preliminary medication of morphine . . . is given one hour before operation. . . . Without premedication, the scope of evipal anethesia is greatly limited, and increased dosage must be given.

"The operative field is completely prepared before starting the injection. A suitable vein in the antecubital fossa is selected, and the arm extended in a comfortable position on an arm board. . . . Having the drug in solution for several minutes before the injection seems to help minimize tremors. Injection is made with a 10 cc. Luer lock syringe, using a good-size needle (No. 19), because if the operation is prolonged, there is less danger of clotting."

No rules regarding dosage can be established. To individualize correctly is the art of evipal narcosis. Depending on the weight, degree of excitement, amount of preoperative medication and general condition of the patient, the authors inject from 2 to 4 cc. very rapidly (that is, 1 cc. every 10 seconds), and then wait 30 seconds to observe the result. "The maximum effect is always reached after several minutes, so that it is possible to exceed the minimal fatal dose during the first few seconds of administration." Although amounts of evipal as great as 30 to 40 cc. have been administered without apparent unfavorable results, their experience would lead them to be very cautious in using over 15 cc.

"Contraindications.—Jarman and Abel consider liver damage, low blood pressure, the sitting position and previous medication with barbiturates as definite contraindications to evipal. . . . It seems reasonable to consider jaundice, cirrhosis or other evidences of liver damage as a definite contraindication." In the authors' opinion, low blood pressure, the presence or imminence of shock and marked debilitation also constitute definite contraindications. They do not use evipal on asthmatics.

"Evipal is a very useful anesthesia for surgical procedures which can be completed in 15 or 20 minutes. The scope of evipal anesthesia may be extended to operations which may require 30 to 40 minutes or even longer. . . . Notably among these are the supplementing of spinal or local anesthesia, certain operations on the head or face, the closure of disrupted wounds and operations under circumstances in which cumbersome apparatus or means of restraining the patient during induction are not easily obtained."—Abstracted from the *International Surgical Digest* for April, 1937.

CORRECTIONS AND ADDITIONS—SEPTEMBER JOURNAL

A number of errors crept into Dr. L. van H. Gerdine's article, "A Neurological Study of a New Method of Treatment for Impaired Vision," which was published in THE JOURNAL for September.

On page 11, first column, line 12, the amount of astigmatism should have been given as ½ diopter.

On page 15, first column, case (3) J. M., the correction for the left eye should have been given as L—1.00 add. +2.00.

On page 15, second column, reference 8, the abbreviation of the publication in which Professor Forster wrote is Klin. Monatsbl.

Reference 12. Kirby: Referred to by Berens, Conrad: The Eye and Its Diseases. W. B. Saunders Co., Philadelphia, 1936.

Reference 15. Sidler-Huguenin: the Arch. Ophth. should have been given as Vol. XLV.

Current Medical Literature

Abstracted by R. E. Duffell, D.O.

Toxic Effects of Sulphonamide

Sulphonamide (commercially known as prontosil) has been used in the treatment of puerperal fever, meningitis, pneumonia, gonorrhea, and recently erysipelas and rheumatic fever with apparently unusual success. However, *The Journal of the A.M.A.* for August 14, in a letter from its London correspondent, reports that prontosil has caused serious toxic symptoms in some cases. One case, reported in the *Lancet* for May 15, was especially serious. The patient, a woman, "was admitted to the hospital for puerperal pyrexia with alarming cyanosis. She had been taking magnesium sulphate as well as sulphonamide (9.6 Gm. of prontosil album in four days). . . . She was apparently moribund, but she recovered under treatment, which included administration of oxygen and blood transfusion."

The correspondent describes another case, this one fatal, which was reported in the *British Medical Journal* for July 17. This patient had acute rheumatism which did not respond to salicylates. He was given 3 Gm. daily of prontosil album for eighteen days. His clinical condition became worse and treatment was stopped. Four days afterward complete agranulocytosis was found and blood culture, previously negative, showed hemolytic bacteria. Death occurred the following day due to agranulocytic angina with septicemia.

Public Health Reports (from the U. S. Public Health Service) for September 3 contain an account of experiments performed by workers at the National Institute of Health on the effectiveness of sulphonamide compounds on virus infections in mice. They summarize their work as follows:

"Prontosil (4-sulphonamide-2-4′-diamino-azobenzene) has been shown to possess protective action in mice against infection with the virus of lymphocytic choriomeningitis. A high percentage of survivals occurred only when therapy was begun shortly after infection, employing large doses of the drug and small infective doses of the virus.

"Prontosil Soluble as well as some related sulphonamide compounds not containing an azo linkage, which are more active than Prontosil against bacterial infections, were found to be inactive against this virus infection.

"No therapeutic activity was obtained against the influenza virus or the encephalitis virus (St. Louis type) with Prontosil or the related compounds studied."

Fever Therapy and Elliott Treatment Combined for Pelvic Inflammation

In the *Archives of Physical Therapy, X-Ray Radium* for May, 1937, Lawrence M. Randall and Frank H. Krusen describe the technic for carrying out the Elliott vaginal heat treatment for chronic pelvic inflammation. A distensible rubber bag is inserted into the vagina. The bag is then distended by means of water under controlled conditions of temperature and pressure. The greater the distention of the bag, the greater the area that will receive heat. In 4,000 tratments given at the Mayo Clinic the average amount of pressure employed has been 2.2 pounds and the average temperature of the water 127 F.

In gonorrheal infections much better results are obtained by fever therapy and Elliott treatment given at the same time than when Elliott treatment alone is given. The authors administer two fever treatments before adding the Elliott treatment on the theory that any vaginal manipulation should be avoided until the virulence of the organisms has been reduced, if possible, by the fever treatment. When the combined method of treatment is employed, the Elliott bag is inserted into the vagina after the temperature of the patient has reached the level which is to be maintained in the fever cabinet. The Elliott treatment is then given from one to three hours at an average temperature of 122 F.

The authors caution that in pelvic inflammatory disease no active local treatment should be instituted in the acute stage, with the exception of the drainage of collections of pus, and in cases of postpartum infections, and infections which follow abortion, in which the Elliott treatment has seemed to be of benefit.

Current Osteopathic Literature

Abstracted by R. E. Duffell, D.O.

CLINICAL OSTEOPATHY
LOS ANGELES

33: No. 6 (June), 1937

Diagnosis: A Foreword. Louis C. Chandler, A.M., D.O., Los Angeles.—p. 5.
Headache. K. Grosvenor Bailey, A.B., D.O., Los Angeles.—p. 8.
Backache. Floyd P. St. Clair, D.O., Los Angeles.—p. 16.
Constipation. Elmer S. Clark, D.O., Long Beach, Calif.—p. 20.
Chronic Fatigue. Thomas J. Meyers, D.O., Pasadena, Calif.—p. 30.
Chest Pain. Wade H. Morris, D.O., Los Angeles.—p. 31.
Vertigo. T. W. McAllister, D.O., Los Angeles.—p. 35.
Dyspnea. Roy D. Kohl, D. O.
Editorial: For a Greater Osteopathy.—p. 48.
Section Programs for 36th Annual Convention of the California Osteopathic Association.—p. 50.
The Physician's Legal Obligation to Use Accepted Methods. Mr. Raymond Nettleship, Los Angeles.—p. 56.

33: No. 7 (July), 1937

Symposium on Ophthalmology:
Foreword. Hoyt F. Martin, D.O., South Pasadena, Calif.—p. 5.
*Injuries to the Eye. Walter V. Goodfellow, D.O., Los Angeles.—p. 8.
When Should the General Physician Call Counsel in Ocular Disease? T. J. Ruddy, D.O., Los Angeles.—p. 15.
Disturbed Function of the Ocular Muscles. Hoyt F. Martin, D.O., South Pasadena, Calif.—p. 27.
Iritis and Glaucoma. Golden S. Rambo, D.O., and Alfons I. Wray, Opt.D., D.O., Los Angeles.—p. 32.
Acute and Chronic Conjunctivitis and Some of the Common Affections of the Eyelids. James A. Bowman, D.O., Pasadena, Calif.—p. 45.
Asthenopia. R. J. Carreon, Jr., Opt.D., D.O., Los Angeles.—p. 46.
Editorial: California Convention.—p. 50.
Guilty of Malpractice? Mr. Raymond Nettleship, Los Angeles.—p. 56.

***Injuries to the Eye.**—Goodfellow outlines treatment for three types of injury:

(1) In those injuries produced by an object which does not remain in the tissues, but may remain in the culde-sac, thorough examination should be conducted under magnification with the optical loupe. Removal of the foreign body should be followed by boric acid irrigations for several days or until all signs of irritation disappear. The eye should be watched for signs of infection or ulceration.

(2) In those injuries produced by an object which remains in the tissue of the eye, but does not enter the anterior or posterior chambers, examination in a dark room under magnification with an indirect light is advisable, so that the cornea may be thoroughly explored. Any foreign body should be removed together with any fragments found. Removal is followed by boric acid irrigations and the eye is put at rest.

(3) In those injuries produced by an object which penetrates the eyeball and lodges or remains in either the anterior or posterior chamber or crystalline lens, the treatment is to remove the object and put the eye at rest. If the object is magnetic, an electro-magnet is useful in removing it. Frequently much vitreous is lost in this procedure, but nature may replenish the supply. However, the probability of saving the eyeball for any considerable time is not good. The author says two years is considered the average length of life of such an eye. If the foreign body cannot be removed, the eyeball should be removed to forestall sympathetic ophthalmia.

Burns of the eyeball should be treated by the use of vaseline or a bland eye ointment to keep the lids from irritating it. The eye should have a firm but not tight bandage over a generous cotton pad to stop the movement of the lids.

THE JOURNAL OF OSTEOPATHY
KIRKSVILLE, MO.

44: No. 8 (August), 1937

K.C.O.S. Alumni Association.—p. 11.
The Lengthening Shadow. H. E. Litton, D.O., Kirksville, Mo.—p. 15.
What's It Worth? H. G. Swanson, M.A., D.O., Kirksville, Mo.—p. 19.
Tennis and Osteopathy. Mr. William T. Tilden.—p. 21.
Editorials: Entrance Requirements; Scottish Osteopathic Research Institute; Committee on Public and Professional Welfare—George M. Laughlin, D.O., Kirksville, Mo.—p. 30.

THE COLLEGE JOURNAL, KANSAS CITY COLLEGE OF OSTEOPATHY AND SURGERY
KANSAS CITY, MO.

21:385-416 (June), 1937

Gangrenous Appendicitis, Gangrenous Cholecystitis Complicated with Gallstones. George J. Conley, D.O., and A. E. Linville, D.O., Kansas City, Mo.—p. 387.
The Treatment of Coronary Occlusion. Neiland H. Hines, D.O., Kansas City, Mo.—p. 391.
Pertussis. Norman C. Edwards, D.O., St. Louis.—p. 393.
The A. O. A. Convention. George J. Conley, D.O., Kansas City, Mo.—p. 395.
A Treatise on Stammering. Mr. Richard K. Freund, Kansas City, Mo.—p. 396.
Proctology in the K.C.C.O.S. Clinic. Mabel Andersen, D.O., Kansas City, Mo.—p. 400.
Surgical Emergencies in Children. Herbert C. Wallace, D.O., Wichita, Kans.—p. 404.
Statistical Resume of the Child's Health Conference. M. E. Johnston, D.O., Kansas City, Mo.—p. 407.
*New Developments in Pediatrics. James M. Watson, D.O., Los Angeles.—p. 409.

***New Developments in Pediatrics.**—Watson believes that in pediatrics the new developments in vitamin therapy are of first importance. The knowledge that the coloring matter of many vegetables, particularly carrots, contains pro-Vitamin A (carotene) which is changed in the mammalian liver into true Vitamin A, was a step forward. Carotene is administered to infants now who are not able to tolerate fats (cases of celiac disease particularly), with happy results. Vitamin A protects the eye tissues, mucous membranes of the respiratory and genitourinary tracts, nervous system, and the skin. In pneumonia the administration of Vitamin A definitely reduces the mortality rate, according to some authorities.

Vitamin B (the richest sources being the bran coats of grains, leguminous seeds and lean pork) has long been recognized as the substance which protects the body against the development of beri-beri or polyneuritis. A pure crystalline Vitamin B (known as Vitamin B_1) has been developed. The lack of this substance has been shown to cause disturbances of carbohydrate metabolism, anorexia, atony of gastrointestinal tract, constipation, etc., and may be an important factor in diabetes mellitus, pernicious anemia, and other serious disorders.

Another recent development is crystalline Vitamin C with ascorbic acid and cevitamic acid. Vitamin C has been shown to be intimately associated with the adrenal cortex. Circulatory and cardiac disturbances of malignant diphtheria have been overcome by the administration of adrenal cortex and ascorbic acid. Vitamin C has been found to be of value therapeutically in rheumatoid arthritis, acute rheumatic fever, tuberculosis, and hemorrhagic diathesis.

Vitamin D has now been isolated in pure crystalline form (Drisdol), making it possible to administer it independent of an oil.

Among other recent developments, briefly mentioned by Watson, are the use of ammonium mandalate in chronic urinary infections, treatment of gonorrheal vaginitis with estrogenic substance, the use of scraped apple and pectin mixtures in the infectious diarrheas of infancy.

In relation to the most common method of the development of the osteopathic lesion, Watson's experience in infants and children has led him to think that "most of the lesions, so-called, are not misplacements in the older sense of the term (the result of force or violence), but are rather developmental asymmetries, the result most commonly of rickets, but ofttimes the consequence of continuous pressure in an asymmetrical direction on the body of the infant both antepartum and post partum."

21:417-448 (August), 1937

Ophthalmology in Obstetrics. Eugene Wise, D.O., Kansas City, Mo.—p. 419.
Rectal Conditions in Children. Mabel Andersen, D.O., Kansas City, Mo.—p. 422.
Artificial Feeding of the Newborn. Annie G. Hedges, D.O., Kansas City, Mo.—p. 426.
*The Symphysis Pubis and Its Relation to Backache. Norman B. Leopold, D.O., Lakin, Kans.—p. 428.
Birth Injuries. N. H. Hines, D.O., Kansas City, Mo.—p. 432.

The Thoracic Pump in the Puerperium. H. G. Glenn, D.O., Stuttgart, Ark.—p. 434.
Chronic Partial Obstruction of Ascending Colon Due to Adventitious Parietocolic Membranes. George J. Conley, D.O., Kansas City, Mo.—p. 436.
Alumni Association Formed.—p. 441.
Aspects of Immunity in Pulmonary Tuberculosis in Children. Erwin I. Schindler, D.O., Kansas City, Mo.—p. 442.
*Some Observations in the Chemical Prophylaxis for Poliomyelitis. L. R. Livingston, D.O., Kansas City, Mo.—p. 444.

***The Symphysis Pubis and Its Relation to Backache.**—Leopold reports that x-rays obtained of the pelves of pregnant women suffering from low backache show narrow symphyses. These women represent a certain type: short and stout body build, pubic hair line of male type, male type of pelvic construction, stubbiness of fingers and toes, history of menstrual disturbance, and small internal measurements (due to thickening of the bones). These objective findings point to endocrine disturbance. The backache in these cases is believed to be the result of a lack of relaxation of pelvic joints as the fetus grows, the cause of which may be the absence of needed secretions from the anterior pituitary. The duty of the osteopathic obstetrician in these cases is to correct existing lesions in the region between the first and sixth thoracic vertebrae with the hope that the cervical ganglia may be affected and in turn the nerve control of the blood vessels to the pituitary gland.

***Some Observations in the Chemical Prophylaxis for Poliomyelitis.**—Livingston gives his observations on the use of certain chemicals applied to the olfactory mucosa as a preventive measure against poliomyelitis. The solution recommended by recognized authorities is composed of 1 per cent zinc sulphate, 1 per cent pontocaine, 0.5 per cent sodium chloride. The use of an atomizer with the ordinary tip introduced is of no value, since in the majority of cases the spray does not pass upward beyond the middle turbinate. A special spray tip must be introduced to the region of the cribriform plate under direct vision. At least I cc. of the solution should be sprayed over each olfactory area. This is done for three successive days. The pontocaine eliminates the discomfort that follows the instillation of zinc sulphate alone, but it numbs the soft palate and makes swallowing difficult for 15 to 30 minutes.

Livingston says that the question still remains, "Will zinc sulphate be as effective in protecting human beings as it has been in protecting monkeys?" This can be determined only by actual clinical use during an epidemic.

OSTEOPATHIC BEACON CHICAGO

May, 1937

Acute Infectious Diseases. R. N. MacBain, D.O., Chicago.—p. 4.
Ketosis and Acidosis. William Loos, D.O., Chicago.—p. 5.
Angina Pectoris with Special Reference to Its Mechanical Causes. Mr. Wesley P. Goulding (Class of '38), Chicago.—p. 6.

August, 1937

*Jaundice. William Loos, D.O., Chicago.—p. 4.
Plans for Future Development of C.C.O. R. N. MacBain, Chicago.—p. 6.
Extensive Improvements in College. Mr. L. B. Whetten, Chicago,—p. 9.
Case History from the Diagnostic Service of the Chicago Osteopathic Hospital. J. S. Denslow, D.O., Chicago.—p. 11.

***Jaundice.**—In this article Loos discusses the principles underlying the production of icterus and describes the tests used as diagnostic and prognostic aids.

Jaundice is produced when the physiologic function of the reticulo-endotheal system is disturbed. While the Kupfer cells of the liver, as part of this system, are engaged in destroying red blood cells and manufacturing bilirubin, these Kupfer cells do not remove the pigment. This function is carried out by the hepatic cells as they synthesize the bile. Adequate numbers of healthy parenchymatous cells are therefore necessary to prevent a hyperbilirubinemia.

Loos classifies the causes of jaundice under two general divisions: (1) Hematogenous, which includes blood dyscrasias, bacterial hemolytic toxins, blood parasites, toxins of poisonous snakes and insects, chemical agents, etc., and (2) hepatogenous, which includes liver and bile tract pathology.

Book Notices

THE ART OF TREATMENT. By William R. Houston, A.M., M.D., F.A.C.P. Cloth. Pp. 744. Price $5.00. The Macmillan Company, 60 Fifth Avenue, New York City, 1936.

Dr. Houston is a clinician of long experience who has observed closely and carefully, who is a sympathetic human being, and whose thoughts run along the line of a practical philosophy. The book is based on a series of consultations and to the reader it is like a series of personal interviews with one having the rich and wholesome sense of humor which comes from close acquaintance with people.

The author expects his reader to come with a prepared mind. In order to get the most out of this valuable book the reader must have a reading acquaintance with the etiology, pathology, pathological physiology, course and duration, and prevention of the diseases discussed. The discussion begins with the point at which treatment comes up for consideration.

The fact is recognized that the attempt to orient medical study about the needs of the sick person encounters many difficulties. There are many who do not know when they are sick. There are others who stop treatment before they are well. The author directs his reader in shouldering the responsibility of fighting indifference as a factor which counts heavily against good treatment and is often the major cause of failure. He recognizes also the fact that a great difficulty is in getting to know the person who has the disease—to know his psychobiology. The design of this book is to encourage therapeutic thinking with the object of surmounting these difficulties. The emphasis is on the method of approach rather than on dogmatic solution of the problem.

The volume is divided into seven "Books." Book I, The Art of Therapeutics, includes such subheads as Honesty, Economics, The Doctor as a Therapeutic Agent; Book II, Patients Who Are to Be Treated Chiefly by Nursing Care; Book III, Specifics; Book IV, Conditions in Which the Chief Therapeutic Method is Psychotherapy or Guidance; Book V, Diseases Which Impose a Limitation Upon Life as the Condition of Treatment (obesity, heart disease, arteriosclerosis, etc.); Book VI, Disorders in Which Physiological Considerations Guide Treatment (peptic ulcer, gout, Bright's disease, etc.); Book VII, Conditions in Which Treatment Is Tentative and Experimental (arthritis, allergic diseases, etc.). The index is ample and the bookwork satisfying. There are more than 700 pages of text.

ROENTGEN INTERPRETATION. A manual for Students and Practitioners. By George W. Holmes, M.D., and Howard E. Ruggles. M.D. Fifth Edition. Cloth. Pp. 356, with 243 engravings. Price, $5.00. Lea & Febiger, Washington Square, Philadelphia, 1936.

This has long been recognized as one of the best textbooks for undergraduates and helpful to practitioners as well. This revision brings the book up to date. The 243 engravings for the most part are made up of excellent reproductions of roentgenograms. The chapter on bone pathology has been completely revised and takes up bone changes associated with various deficiency diseases and glandular dysfunctions as well as rarer conditions. Considerable new material has been added.

THE DISEASES OF INFANTS AND CHILDREN. By J. P. Crozer Griffith, M.D., Ph.D., and A. Graeme Mitchell, M.D. Second Edition. Cloth. Pp. 1154, with 293 illustrations. Price $10.00. W. B. Saunders Company, West Washington Square, Philadelphia, 1937.

The book begins with the anatomy and physiology of the newborn infant followed by details of hygiene, breast feeding, constituents of milk, general principles of substitute feeding, diet, treatment, etc. The various diseases of children are dealt with in detail. The illustrations are good, and each chapter is followed by a good bibliography.

SYNOPSIS OF ANORECTAL DISEASES. By Louis J. Hirschman, M.D., F.A.C.S. Cloth. Pp. 288, with 174 text illustrations and six color plates. Price, $3.50. C. V. Mosby Company, 3523-25 Pine Blvd., St. Louis, 1937.

A clear description of proctologic procedures and operations, most of which may be performed in the office.

TEXTBOOK OF MEDICINE. Edited by J. J. Conybeare, M.C., M.D. Oxon., F.R.C.P. Third Edition. Cloth. Pp. 1027, with twenty-five figures and twenty-four plates. Price, $7.00. William Wood & Co., Mt. Royal and Guilford Aves., Baltimore, 1936.

This book is more than a synopsis and less than an exhaustive "system" of medicine. It is carefully prepared, easy to read, instructively illustrated, compact and practical.

PHYSICAL DIAGNOSIS. By Ralph H. Major, M.D., Professor of Medicine in the University of Kansas. Cloth. Pp. 457, with 427 illustrations. Price, $5.00. W. B. Saunders Company, West Washington Square, Philadelphia, 1937.

A guide for the medical student, taking one step by step and explaining in detail not only the physical signs, but also the physical phenomena responsible for each. There is a good index, and a bibliography accompanying each chapter.

THE LARYNX AND ITS DISEASES. By Chevalier Jackson, M.D., ScD., LL.D., F.A.C.S., Professor of Bronchoscopy and Esophagoscopy, Temple University, Philadelphia, and Chevalier L. Jackson, A.B., M.D., M.Sc. (Med.) F.A.C.S., Professor of Clinical Bronchoscopy and Esophagoscopy, Temple University, Philadelphia. Cloth. Pp. 555 with 221 illustrations, including eleven plates in color. Price, $8. W. B. Saunders Co., West Washington Square, Philadelphia, 1937.

From the standpoint of either diagnosis or treatment this book fills a need which has long been felt. The larynx is considered from the standpoint of anatomy, physiology, general conditions, etc. There is consideration of anomalies, injuries, inflammation, tumors, etc. The illustrations are fine.

THE LITTLE THINGS IN LIFE: The Vitamins, Hormones, and Other Minute Essentials for Health. By Barnett Sure, Ph.D., Professor of Agricultural Chemistry in the University of Arkansas. Cloth. Pp. 340. Price, $2. D. Appleton-Century Company, 35 W. 32nd Street, New York City, 1937.

Vitamins, organic salts, etc., have been referred to as "the little things" in nutrition. Dr. Sure uses this thought in saying of the vitamins, hormones, and other minute essentials that "they can make or break the human organisms. The little things in life actually are the big things in life." The book is written for the public and includes a glossary of medical terms. Most of the information is sound and technically correct, though some of the material is obsolete or inadequately presented.

CANCER AND DIET: With Facts and Observations on Related Subjects. By Frederick L. Hoffman, LL.D. Cloth. Pp. 767. Price, $5.00. The Williams & Wilkins Company, Mt. Royal and Guilford Aves., Baltimore, 1937.

This is a careful scientific survey based on an extensive study of medical literature from many countries and a study of the dietary customs of various native populations and also on an analysis of 2,000 questionnaires obtained through interviews with cancer patients in American cities. Dr. Hoffman is not a physician but a world famous expert in vital statistics and personally active for many years in the campaign against cancer.

THE PRACTITIONERS LIBRARY OF MEDICINE AND SURGERY. Volume XI—Eye, Ear, Nose and Throat. Supervising Editor: George Blumer, M.A., M.D., Yale University School of Medicine. Associate Editors: Arthur M. Yudkin, M.D., and Paul B. MacCready, M.D., F.A.C.S., both of Yale University School of Medicine. Cloth. Pp. 1153 with illustrations. Price $10. Sold only in sets. D. Appleton-Century Company, 35 W. 32nd St., New York City, 1937.

As would be expected from the name of the set of books, and in keeping with the other volumes, this textbook is written from the viewpoint not so much of the specialist as of the general practitioner. At the same time technical subjects are not neglected as, for instance, the use of the slit lamp in ophthalmology. The excellent illustrations and the practical methods of treatment outlined herein will be of great help to the general practitioner who is called upon to diagnose and even to treat easily apparent conditions affecting the eyes. Here again, although the book is primarily for the general practitioner, it does not neglect the technical procedures such as few but a specialist would undertake.

MATERIA MEDICA, TOXICOLOGY AND PHARMACOGNOSY. By William Mansfield, A.M., Phar.D. Cloth. Price, $6.75. Pp. 707, with 202 illustrations. C. V. Mosby Company, St. Louis, Mo., 1937.

In this text the drugs are so classified and grouped as to permit ready reference. All descriptions are systematized. Working photographs of the various drugs face the descriptions and for each drug is given its Latin title, abbreviation, English name, synonym, botanic name, part or parts used, impurities, assay, ash, habitat, description, constituents, dose, preparations, properties, uses and toxicology.

NATIONAL HEALTH SERIES. Adolescence, by Maurice A. Bigelow, Ph.D., S.Sc.; How to Sleep and Rest Better, by Donald A. Laird, Ph.D., Sc.D.; Love and Marriage, by T. W. Galloway, Ph.D., Litt.D.; Exercise and Health, by Jesse Feiring Williams, A.B., M.D.; Food for Health's Sake, by Lucy H. Gillett, B.S., M.A.; Hear Better, by Hugh Grant Rowell, M.D.; Cancer, by Francis Carter Wood, D.Sc., M.D.; Diabetes, by James Ralph Scott, M.D.; The Expectant Mother and Her Baby, by R. L. DeNormandie, M.D.; Taking Care of Your Heart, by T. Stuart Hart, M.D.; The Healthy Child, by Henry L. K. Shaw, M.D.; The Common Cold, by W. G. Smillie, M.D.; The Common Health, by James A. Tobey, Dr.P.H.; What You Should Know About Eyes, by F. Park Lewis, M.D.; Tuberculosis, by H. E. Kleinschmidt, M.D.; Why the Teeth, by Leroy M. S. Miner, D.M.D., M.D.; Your Mind and You, by George K. Pratt, M.D.; Staying Young Beyond Your Years, by H. W. Haggard, M.D.; The Human Body, by Thurman B. Rice, A.M., M.D.; Venereal Diseases, by Wm. F. Snow, A.M., M.D. Cloth. About 100 pages each. Price, $.35 a volume. Funk & Wagnalls Company, New York City, 1937.

These well-known booklets were first issued by the National Health Council in 1934. This edition consists of revisions of most of the series with a few replacement volumes. They have bright cloth covers instead of the former limp fabricoid. The information is quite safe and authentic and the books have a wide general distribution.

AN AMERICAN DOCTOR'S ODYSSEY. Adventures in Forty-five Countries. By Victor Heiser, M.D. Cloth. Pp. 544 with illustrations. Price, $5.00. W. W. Norton & Co., Inc., 70 Fifth Ave, New York.

This is an absorbing chronicle of events in the life of a public health doctor. Left an orphan at the age of sixteen as a result of the Johnstown flood in 1889, Heiser was compelled to make his own way. He was in succession a plumber, carpenter and physician, the last named only after diligent study and hard work. His public health career started in the service of the Marine Hospital where he gained considerable experience as an immigration officer. An ocean voyage to Italy to undertake a delicate mission for the United States Government, having to do with the prevention of cholera by examining immigrants at the ports of departure, was but the first of thousands of miles of travel as a health officer in the U. S. Immigration Service and later as an emissary of health philanthropy in the employ of the Rockefeller Foundation.

Some of his most interesting experiences were encountered as Director of Health of the Philippines following the acquisition of that territory by the United States. The Archipelago was visited by one epidemic after another—plague, cholera, smallpox, etc., most of these diseases being brought in by trading ships from the Orient. His task to clean up the islands, establish health laws, quarantine and inspect trading ships was a huge one, but hard work and perseverance finally brought the great pestilences under control, and the Philippines became a healthful place to live in. Perhaps the most difficult obstacle he had to overcome was the utter disregard by the natives of the islands for their own health. They felt at first that the Americans were interfering with their home life and the customs established for many years.

In 1914 Dr. Heiser began his work with the Rockefeller Foundation. He traveled all over the world, visiting some sixty odd countries, giving to them the health service, when wanted, of that large philanthropic organization. He made notable discoveries in the prevention of hookworm disease.

Throughout all his travels Dr. Heiser has been a keen observer of the peoples he visited, their customs, their temperaments, their religions. His ability to describe these things has made the book one of the outstanding contributions to nonfiction literature in 1936.

R. E. D.

State Boards

Connecticut

The following are the present officers: President, Clarke M. Van Duzer, Greenwich; secretary, Foster D. Clark, Torrington; treasurer, Frank L. Teall, New Haven. Dr. Clark was recently appointed for a four year term.

Florida

The next examinations will be held November 4, 5 and 6 at Jacksonville. For application blanks write to Ralph B. Ferguson, Secretary-Treasurer, 401-5 First National Bank Building, Miami.

Georgia

The following are the present officers and members: President, Evan P. Davis, Augusta; vice president, Walter B. Elliott, Atlanta; secretary-treasurer, W. A. Hasty, Griffin; members, Frank F. Jones, Macon, and R. E. Andrews, Rome.

Illinois

Oliver C. Foreman, 58 East Washington St., Chicago, reports that the next examinations will be held on October 19, 20, and 21 at Chicago.

Indiana

E. O. Peterson, La Porte, was recently reappointed for a four year term and was elected vice president in September.

Iowa

C. N. Stryker, Sheldon, was recently appointed for a three year term to succeed William D. Andrews of Algona.

The Iowa Board of Examiners in the Basic Sciences will conduct a written examination at the State Capitol, Des Moines, on October 12 at 9:00 a.m. Address E. A. Benbrook, V.M.D., Secretary, Iowa Basic Science Board, c/o Iowa State College, Ames.

Kansas

The following are the present officers and members: President, William S. Childs, Salina; secretary, J. E. Freeland, Coffeyville; members, Raymond L. DeLong, Wichita; Thomas B. Powell, Larned; Paul R. Jones, Greensburg.

Michigan

The following are the present officers and members: President, John P. Wood, Birmingham; vice president, C. B. Stephens, Detroit; secretary-treasurer, Claude B. Root, Greenville; members, H. Rex Holloway, Battle Creek, and F. Hoyt Taylor, Lansing.

Missouri

Osteopathic physicians licensed to practice in Missouri must reregister annually on or before November 1 with a fee of $2.00. For those practicing outside the state there is no additional requirement but for those practicing in Missouri there must be attendance at one or more of the following named educational courses:

1. Postgraduate work in any of the colleges recognized by the Missouri board or senior class work done by 1937 graduates, or internship in approved osteopathic institutions.
2. Postgraduate work at the Kansas City Child Health Conference and Clinic.
3. Postgraduate work at the Alumni Postgraduate Course and Clinic of the Kansas City College of Osteopathy and Surgery.
4. A two-day educational program provided by the Missouri Association, time and place to be determined at the annual business meeting of the association.
5. Attendance at the Missouri annual state convention.
6. Postgraduate work at the Denver Polyclinic and Postgraduate College.
7. Postgraduate work at the annual convention of the American Osteopathic Association.
8. Approval of any of these courses for the purpose of certification for registration of license "is contingent upon membership in the Missouri Association of Osteopathic Physicians and Surgeons being required, by the sponsors of the postgraduate course, before matriculation in such course, of those who are practicing within the state of Missouri."
9. Attendance at the equivalent of the above in another state.

New Mexico

The following officers were elected recently: President, C. Merwin Bueler, Tucumcari, reelected; vice president, L. M. Pearsall, Albuquerque; secretary-treasurer, Caroline C. McCune, Santa Fe, reelected.

North Dakota

C. D. Thompson, Fargo, recently was appointed for a three year term.

Ohio

W. R. Gregg, Oberlin, was reappointed for a three year term.

Ontario

Robert B. Henderson, Toronto, was reappointed for a two year term.

Conventions and Meetings

Announcements

American Osteopathic Association, Forty-Second Annual Convention, Cincinnati, July 11-15, 1938. Program chairman, R. McFarlane Tilley, New York City.

American College of Osteopathic Surgeons, Kirksville, Mo., October 3-5.

American Osteopathic Society of Proctology, Marietta, Ohio, July 8, 9, 1938.

Arizona state convention, Phoenix, October 16.

Arkansas state convention, Little Rock, May, 1938. Program chairman, Charles A. Champlin, Hope.

British osteopathic convention, London, October. Program chairman, Leon Sikkenga, London.

California midwinter meeting, Sacramento, January 28, 29; state convention, Hotel Del Coronado, San Diego, June 20-23, 1938.

Eastern Osteopathic Association, Hotel Pennsylvania, New York City, April 2, 3, 1938. Program chairman, F. Gilman Stewart, New York City.

Georgia state convention, Hotel Dempsey, Macon, May 20, 21, 1938. Program chairman, D. C. Forehand, Albany.

Illinois state convention, Rockford, June, 1938. Program chairman, C. E. Medaris, Rockford.

Indiana state convention, Oliver Hotel, South Bend, October 13, 14. Program chairman, L. A. Rausch, South Bend.

Kansas state convention, Lora-Locke Hotel, Dodge City, October 12-14. Program chairman, Frank W. Shaffer, Salina.

Kentucky state convention, Brown Hotel, Louisville, October 28, 29. Program chairman, E. W. Patterson, Louisville.

Louisiana state convention, Lake Charles, October 22-23. Program chairman, A. E. Stanton, Crowley.

Michigan state convention, Grand Rapids, October 26-28.

Minnesota state convention, Minneapolis, May 6, 7, 1938.

Missouri state convention, Connor Hotel, Joplin, October 6-8. Program chairman, Ottis L. Dickey, Joplin.

New Hampshire state convention, Concord, first week of May, 1938. Program chairman, C. S. Garran, Rochester.

New York state convention, Hotel Pennsylvania, New York City, October 2, 3. Program chairman, Eugene R. Kraus, New York City.

Ohio state convention, Marietta, May 15-17, 1938.

Oklahoma state convention, Ponca City, April, 1938. Program chairman, D. W. Streitenberger, Ponca City.

Oregon state convention, Le Grande, June, 1938. Program chairman, Fred S. Richards, Forest Grove.

Pennsylvania state convention, Erie, October 8, 9. Program chairman, H. Willard Sterrett, Philadelphia.

South Dakota state convention, Huron, May, 1938.

Southwestern Internists Conference, Adolphus Hotel, Dallas, Texas, October 15, 16. Program chairman, Sam Sparks, Dallas.

Vermont state convention, Bennington, October 6, 7. Program chairman, C. O. Gaskell, Rutland.

West Virginia state convention, Huntington, early part of May, 1938.

Wisconsin state convention, Appleton, October 9. Program chairman, M. G. Ellinger, Milwaukee.

Official and Affiliated Organizations

ARIZONA

State Society

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Industrial and institutional service, Carlton E. Towne, Tucson; legislation, A. B. Stoner, Phoenix.

ARKANSAS

State Association

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Membership, Daniel A. English, Texarkana; professional education, Etta E. Champlin, Hope; censorship, L. J. Bell, Helena; student recruiting, William D. English, Texarkana; public health and education and convention program, Charles A. Champlin, Hope; industrial and institutional service, J. Falkner, Texarkana; clinics, Edna W. Nies, Blytheville; publicity, B. F. McAllister, Fayetteville; statistics, H. V. Glenn, Stuttgart; convention arrangements, Chester C. Chapin, Little Rock; legislation, E. M. Sparling, Hot Springs National Park, and H. V. Glenn, Stuttgart; professional development, Carl H. Nies, Blytheville; displays at fairs and expositions, A. H. Sellars, Pine Bluff.

CALIFORNIA

State Association

The officers were reported in THE JOURNAL for August. C. B. Rowlingson, Los Angeles, is secretary-treasurer and editor. The following committee chairmen have been appointed: Membership, Raymond P. Kellogg, Alhambra; professional education, Basil K. Woods, Los Angeles; censorship, W. W. Vanderburg, San Francisco; public health and child welfare, Lilly G. Harris, Oakland; publicity, William A. Easter, Los Angeles; statistics, C. B. Rowlingson, Los Angeles; convention program, Hoyt F. Martin, South Pasadena; legislation, Glen D. Cayler, Los Angeles; displays at fairs and expositions, Dain L. Tasker, Los Angeles; public relations, Dr. Easter; extension and education, Basil K. Woods, Los Angeles.

Citrus Belt Branch

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Membership, Frank H. Dooley, Pomona; censorship, C. A. Rice, Corona; public health and education, Helen R. Fenton, San Bernardino; publicity. Murray D. Weaver, Ontario; public relations, Alfred C. Fulmor, Riverside; program, Howard C. Atwood, Riverside; legislation, Errol R. King, Riverside.

Glendale Branch

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Membership, Guy A. Martin; hospitals, Oscar A. Dieterich; censorship, Leland C. Morris; publicity, Henry R. Salisbury; legislation, J. E. Eckles, all of Glendale.

Long Beach Branch

The following are the present officers and committee chairmen: President, George F. Scouten; vice president, Edgar Christensen; secretary-treasurer, Paul A. Ford; membership, Ward G. DeWitt; professional education, Rufus A. Davis; hospitals, Samuel A. Reese; censorship, J. Gerald Houts; student recruiting, Lucius B. Smith; public health and education, Charles R. Poitevin; industrial and institutional service, Reynolds B. Thompson; clinics, Bruce E. Waller; publicity, Arthur E. Pike; statistics, Dr. Ford; convention program, Ione Ingles; legislation, Elmer S. Clark; professional development, Edgar W. Christensen, all of Long Beach.

Los Angeles Branch

On September 13 the following program was presented: "National Convention Reports," Georgia A. Steunenberg, Ralph W. Rice and Carle Phinney; "Building and Ground Improvements at the College," J. Strothard White; "The Practice of Industrial Medicine," Patrick S. O'Reilly, all of Los Angeles.

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Insurance, Norman W. Giesy; program, John A. Costello; attendance, Ross B. Thompson; publication, Ralph E. Copeland; public health and child welfare, Florence Whittell, all of Los Angeles.

Orange County Branch

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Membership, W. L. Bingham, Anaheim; professional education, W. W. Illsley, Fullerton; hospitals, Lawrence M. Young, Santa Ana; censorship, Ernest S. Gienger. Buena Park; student recruiting, Grace E. P. Comer, Laguna Beach; public health and education, Loman C. Adams, Santa Ana; industrial and institutional service, R. W Tibbetts, Santa Ana; clinics, Emblen N. Cooke, La Habra; publicity, Horace J. Howard, Santa Ana; statistics, Bernice Bennett, Huntington Beach; convention program, Hester Olewiler, Santa Ana; convention arrangements, Mary Pittman Ruenitz, Fullerton; legislation, Horace W. Leecing, Santa Ana; professional development, Julia Hinrichs, Santa Ana; displays at fairs and expositions, H. G. Carlin, Anaheim.

Pasadena Branch

The officers were reported in THE JOURNAL for June. The following committee chairmen have been appointed: Membership, Edward W. Milum; censorship, Grant E Phillips public health and child welfare, Ernest Thomas Fox; industrial and institutional service, Richard A. Schaub; clinics, Louise Ferris Swift; publicity, William F. Madsen; legislation, A. V. Kalt, and R. W. Reitzell, all of Pasadena, and student recruiting, John Stratton, Alhambra.

COLORADO

State Association

The officers were reported in THE JOURNAL for August. The following committee chairmen have been appointed: Membership, William M. Koons, Boulder; professional education, M. F. Bartlett, Englewood; entertainment, F. E. Johnson, Colorado Springs; student recruiting, Raymond L. Atterberry, Canon City; public health and education, Donald C. Giehm, Boulder; industrial and institutional service, G. R. Clark, Arvada; women's organization, Freeda Lotz-Kellogg, Denver; convention program, M. F. Bartlett, Englewood; legislation, G. W. Bumpus, Sr., Denver; displays at fairs and expositions, E. J. Willbanks, Denver.

Colorado Springs Osteopathic Association

The present officers are: President, P. D. Schoonmaker; vice president, Percy E. Townsley; secretary-treasurer, O. D. Fry, all of Colorado Springs.

DISTRICT OF COLUMBIA

The names of the officers were published in The Journal for August. Committee chairmen have been appointed as follows: Membership, Mary K. Johnstone; professional education and development, Riley D. Moore; hospitals and clinics, Thomas J. Howerton; student recruiting, George W. Maxfield; public health and education and publicity, Clarence R. Cook; industrial and institutional service, Paul H. Hatch; legislation, Chester D. Swope.

FLORIDA

Lake County Association of Osteopathic Physicians and Surgeons

The following officers were elected on September 8: President, G. A. Richardson, Mt. Dora; vice president, C. S. Ball, Eustis; secretary, E. L. Schumacher, Eustis; treasurer, M. G. Hunter, Leesburg.

IDAHO

Boise Valley Osteopathic Society

On August 19 a picnic meeting was held at Caldwell. O. R. Meredith, Nampa, discussed proctological diagnosis and treatment.

ILLINOIS

Chicago Osteopathic Society

On September 2 Eugene U. Still, Chicago, spoke on "The Gastrointestinal Tract, Its Control."

Chicago—West Suburban Osteopathic Society

At Oak Park, September 18, Anna Mary Mills, Chicago, spoke on "Child Psychology."

Decatur Osteopathic Society

At the September meeting the matter of a uniform fee for health examinations was discussed.

Illinois Valley Osteopathic Society.

At Ottawa, September 16, L. P. Ramsdell, La Porte, Ind., spoke on posture, illustrating his talk with a manikin.

Third District Illinois Osteopathic Association

At Aledo, September 2, R. P. Armbruster, Pontiac, spoke on the new hygienic marriage law, examinations

for the proposed drivers' license law, and insurance claims.

INDIANA

State Association

The thirty-ninth annual convention of the Indiana Osteopathic Association of Physicians and Surgeons will be held at the Oliver Hotel, South Bend, October 13 to 14. The following scientific program is to be presented:

October 13—Symposium on Peptic Ulcer—"Discussion of Its General Features, Etiology, Pathology and Pathological Physiology," Otterbein Dressler, Philadelphia; "Roentgen Diagnosis and Differentiation From Malignant Ulcer," Paul T. Lloyd, Philadelphia; "Management," Ralph L. Fischer, Philadelphia—"Radiographic Postural Studies," Dr. Lloyd; "Discussion of Diseases of the Vegetative Nervous System," Dr. Fischer; "Present Status of the Schilling Hemogram," Dr. Dressler.

October 14—Symposium on Diseases of the Kidney—"Pathology of the Various Surgical Diseases of the Kidney and also the Three Stages of Nephritis," Dr. Dressler; "Roentgen Evidence or Roentgen Visualization of Renal Pathology," Dr. Lloyd; "Diagnosis, Differential Diagnosis and Management of These Lesions of the Kidney," Dr. Fischer—"The Psychoneuroses in General Practice, Discussing Hysteria, Neuresthenia, and Psychasthenia in General Practice," R. C. Slater, Ottawa; "A Discussion of Bronchogenic Carcinoma Pathology," Dr. Dressler; "The Roentgen Diagnosis," Dr. Lloyd; "The Management," Dr. Fischer.

First District Indiana Osteopathic Association

The following are the present officers: President, Ralph Bass, Indianapolis; vice president, L. E. Layne, Crawfordsville; secretary-treasurer, C. V. Fulham, Frankfort.

IOWA

Polk County Osteopathic Association

At Des Moines, September 10, James A. Humphrey, Des Moines, spoke on "The Primary Osteopathic Lesion," followed by a round table discussion of the subject.

A special luncheon meeting was held on September 15 in honor of Perrin T. Wilson, Cambridge, Mass.

KANSAS

State Society

The tentative scientific program of the thirty-eighth annual convention of the Kansas State Osteopathic Association at Lora-Locke Hotel, Dodge City, October 12-14, was published in THE JOURNAL for September. The following additions and substitutions have been made: "Osteopathic Etiology of Lower Dorsal and Lumbar Pain," Lawton M. Hanna, Clay Center; "Essentials Necessary for the Successful Treatment of Hernia," James B. Donley, Kingman; "Deficiency Diseases and Their Relationship to Diet," E. F. Pellette, Liberal. Fred M. Still, Macon, Mo., will be a guest speaker.

Arkansas Valley Society of Osteopathic Physicians and Surgeons

On August 26 at Larned, L. W. Linder, Hoisington, spoke on "Osteopathic Prenatal Care in Obstetrics," and B. L. Gleason, Larned, gave a paper on "Diseases of the Liver, Gallbladder and Appendages."

Central Kansas Association of Osteopathic Physicians and Surgeons

At Milford, August 19, Dr. R. K. Nabours of Department of Zoology of the State College at Manhattan spoke on "Further Facts About Heredity."

Eastern Kansas Osteopathic Society

At Emporia, July 15, J. F. Dinkler, Emporia, spoke on "Professional Affairs."

A meeting was held at Garnett, September 9.

North Central Society of Osteopathic Physicians and Surgeons

At Beloit, June 10, Kirkland A. Bush, Harper, spoke on "European Obstetrics."

North East Kansas Osteopathic Association

On August 4, a clinic day was held at Blue Rapids. W. S. Childs, Salina, spoke on "Osteopathy," Wm. P. Lenz, St. Joseph, Mo., on "Osteopathic Cooperation and Support of Osteopathic Institutions," and T. H. Hedgpeth, St. Joseph, Mo., on "Anesthesia."

At Marysville, September 2, Clinton B. Hash, Seneca, read a paper on "The Treatment of Burns," and Glenn A. Baird, Sabetha, on "Infantile Paralysis."

The next meeting will be at Sabetha, November 3.

Southern Kansas Osteopathic Association

At Oxford, August 10, H. C. Wallace, Wichita, spoke on "Heart Conditions."

South Central Kansas Osteopathic Society

On September 16, a meeting was held at Cedarvale.

KENTUCKY

State Association

The annual convention of the Kentucky Association of Osteopathic Physicians and Surgeons will be held at the Brown Hotel, Louisville, October 28 and 29. Russell C. Slater, Ottawa, Ill., and Gertrud Helmecke, Cincinnati, Ohio, will be the guest speakers.

LOUISIANA

Southwest Louisiana Osteopathic Association

On August 15 at Opelousas, case reports were presented and discussed.

MAINE

State Association

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Newspaper publicity, Lloyd Morey, Millinocket; radio publicity, H. J. Pettapiece, Camden; vocational guidance, Howard P. Patterson, Guilford; industrial accident and insurance, Mason H. Allen, Portland; legislation, Albert E. Chittenden, Auburn; hospital, M. Carman Pettapiece, Camden; public relations, Addie K. Betts, Porland; program, Milton F. Hall, Kennebunk.

York County Osteopathic Society

At Kennebunk, August 26, Gervaise C. Flick, Boston, Mass., was the principal speaker.

MASSACHUSETTS

Worcester District Osteopathic Society

At Worcester, September 15, Laurence M. Blanke, Dedham, and H. E. Cash, Newton Center, were the speakers.

MISSOURI

State Association

The thirty-seventh annual convention of the Missouri Association of Osteopathic Physicians and Surgeons will be held at the Connor Hotel, Joplin, October 6-8. The following scientific program is to be presented:

October 6—"The Challenge and the Response," H. G. Swanson, Kirksville; "Technic," F. J. Meyer, Clayton; "Dr. Still's Contribution to Medical Science," and "Goiter," George M. Laughlin, Kirksville; "My Observations During Sixteen Years of Obstetrical Practice," Donald G. Hazzard, Olney; "Importance of Early Diagnosis in the Treatment of Cancer," S. Borough, South Bend, Ind.; "Need for Research," H. S. Claypool, Hume; "The Gallbladder in General Practice," F. W. Zuspan, Flat River; "Common Causes of Pelvic Disorders," Margaret Jones, Kansas City.

October 7—"Prostatic Resection," Earl Laughlin, Jr., Kirksville; "State Medicine," R. C. McCaughan, Chicago, Executive Secretary of the A.O.A.; "Membership," F. A. Gordon, Marshalltown, Iowa; "Differentiation of Renal and Acute Abdominal Pathologies," George J. Conley, Kansas City; "Technic," F. J. Meyer, Clayton; "Memorial Service to Dr. T. O. Pierce," Collin Brooke, St. Louis, Q. L. Drennan, St. Louis, W. E. Hartsock, St. Joseph, and T. H. Hedgpeth, St. Joseph; "Industrial Injuries," Walter E. Bailey, St. Louis; "Proctology," Mabel Anderson, Kansas City; "Foot Technic," Mary E. Golden, Des Moines. W. Curtis Brigham, Los Angeles, is also scheduled to speak.

October 8—"High Blood Pressure," Earl C. Macey, Marshall; "Bone Graft," George M. Laughlin, Kirksville; "Diagnosis and Treatment of Chronic Salpingitis," O. G. Weed, St. Joseph; "Lymph Drainage in Common Diseases of the Head and Throat," Nelle D. Turney, Oregon; "Sinus Disease," L. S. Larimore, Kansas City; "Technic," Dr. Meyer.

Central Missouri Osteopathic Association

At Madison, August 19, T. R. Turner, Madison, spoke on "The Relation of Doctor to Patient," and F. L. Mitchell, Excelsior Springs, on "Kidney Diagnosis."

Kansas City Society of Osteopathic Physicians

The officers were reported in THE JOURNAL for August. The following committee chairmen have been appointed: Membership, Herman Shablin; professional education and professional development, J. M. Peach; hospitals, L. J. Graham; censorship, David S. Cowherd; student recruiting, Byron E. Laylock; public health education, Mabel Andersen; industrial and institutional service, H. J. McAnally; clinics,

G. N. Gillum; publicity, Reginald A. Murren; statistics, J. J. Critten; local program, Arthur B. Bover; local arrangements, Charles Alhante; legislation, George J. Conley; displays at fairs and expositions, L. S. Larimore, all of Kansas City.

North Central Missouri Osteopathic Association

On August 22 near Brunswick, J. L. Jones, Kansas City, spoke on "Children's Diseases," and G. N. Gillum, Kansas City, on "Nervous Ailments."

Northeast Missouri Osteopathic Association

At Hannibal, August 12, motion pictures were shown on "The History and Development of Osteopathy," and "Posture."

St. Louis Osteopathic Association

On September 21 F. J. Meyer, Clayton, discussed and demonstrated osteopathic technic.

Southeast Missouri Osteopathic Association

At Cape Girardeau, September 13, the following officers were elected: President, C. W. Kinsey, Cape Girardeau; vice president, W. A. Rohlfing, Flat River; secretary-treasurer, Isobel A. Gerdes, Fredericktown.

Southwest Missouri Osteopathic Association

At Aurora, September 17, H. G. Swanson, Kirksville, was the speaker.

West Central Missouri Osteopathic Association

A picnic meeting was held at Windsor, August 19. W. M. Pearson, Kirksville, spoke on "More Osteopathy and Less Something Else."

A meeting was held on September 9 at Chillicothe.

NEW HAMPSHIRE

State Society

The officers were reported in THE JOURNAL for June. The following committee chairmen have been appointed: Membership, Eva W. Magoon, Troy; professional education, E. Parker Little, Nashua; hospitals and convention arrangements, O. R. Strong, Concord; censorship, Karl Steady, Laconia; student recruiting, Charles Bowles, Plymouth; public health and education, Marion G. Caldwell, Dover; industrial and institutional service, John W. Parfitt, Manchester; clinics, Roy M. Kincade, Concord; publicity, R. G. Beverly, Keene; statistics, John McClure Gove, Concord; convention program, C. S. Garran, Rochester; legislation, L. Lynn Cutler, Berlin; professional development, Kenneth R. Steady, Portsmouth.

NEW JERSEY

State Society

The thirty-seventh semiannual convention of the New Jersey Osteopathic Society was held on September 18 at the Chalfonte-Haddon Hall, Atlantic City. The following program was presented: "Diagnosis and Treatment of Bronchopneumonia," Edward A. Ward, Saginaw, Mich.; "Treatment of Spinal Curvatures," George M. Laughlin, Kirksville, Mo.; "Ambulatory Treatment of Tuberculosis of the Hip," W. H. Wiggins, Boonton; "Shoulder Injuries," James A. Stinson, St. Petersburg, Fla.; "Principles of the Rib Lesion and Its Correction," J. S. Denslow, Chicago.

Mercer County Osteopathic Society

The officers were reported in THE JOURNAL for August. The following committee chairmen have been appointed: Membership, J. W. Barnett; professional education, Samuel Getlen; censorship, Edwin J. S. Anderson; public health and education and publicity, Robert H. Conover; statistics, Edgar J. Fiestal; legislation, Lois S. Goorley; professional development, Harold C. Riley, all of Trenton, and student recruiting, Loren H. Odden, Princeton.

Southern New Jersey Osteopathic Society

The following are the present officers and committee chairmen: President, Richard F. Leedy, Woodstown; vice president, Carl Fischer, Woodbury; secretary-treasurer, William A. Pohlig, Paulsboro; membership, Robert H. Powell, Pitman; hospitals, professional education and development, H. V. Durkee, Bridgeton; legislation and censorship, Dr. Fischer; student recruiting, W. Edward Prigger, Penns Grove; public health and education, W. Irvin Atkinson, Millville; clinics and statistics, James M. Gates, Bridgeton; publicity, Richard F. Leedy, Woodstown.

NEW MEXICO

State Association

The annual convention of the New Mexico Association of Osteopathic Physicians and Surgeons was held on September 3 and 4 at the Alvarado Hotel, Albuquerque, and the following program was presented: "Catarrhal Deafness," I. D. Miller, Denver; "Injection Treatment of Hernia," L. J. Vick, Amarillo; "Obstetrical Surgery," J. L. Dulanty, Fort Sumner; "Syphilis," E. B. Godfrey, M.D., State Director of Public Health. Others speakers were Caroline C. McCune, Santa Fe; H. E. Donovan, Raton; C. M. Bueler, Tucumcari; Clarence E. Hoermann, Mountainair; C. H. Conner, Albuquerque.

The following officers were elected: President, Thomas B. Morgan, Clovis; vice president, C. E. Hoermann, Mountainair; secretary-treasurer, L. C. Boatman, Santa Fe; trustees, J. Paul Reynolds, Roswell, Drs. McCune and Bueler.

NEW YORK

State Society

The thirty-ninth annual convention of the New York Osteopathic Society will be held at Hotel Pennsylvania, New York City, October 2 and 3. The following scientific program is to be presented:

October 2—"Faulty Body Mechanics Resulting from Actual Short Leg," W. A. Schwab, Bloomington, Ill.; "Borderline Cases in Acute Abdomens," Herbert C. Wallace, Wichita, Kans.; "The American Eskimo, His Health in a Changing Environment," L. M. Waugh, Orthodontist, New York City; "Athletic Injuries," H. V. Halladay, Des Moines; "How the Department Handles a Compensation Case," Mr. M. J. Murphy, Director of the Bureau of Workmen's Compensation, New York State Labor Department; "Causes of Death," M. E. Marten, M.D., Deputy Chief Medical Examiner of the City of New York; "This Mismanaged Colon," Ralph P. Baker, Lancaster, Pa.

October 3—"Taping: Modern Methods of Adhesive Strapping," Dr. Halladay; Symposium on Diseases of the Nasal Accessory Sinuses Presented by the New York Osteopathic Clinic: "The Etiology of Sinus Pathology," J. Marshall Hoag; "The Value of X-Ray Diagnosis in Sinus Disease, Incorporating an Appraisal of the Proetz Technic," Eugene R. Kraus; "An Evaluation of Therapeutic Methods," Thomas R. Thorburn, all of New York City; "Questions on Compensation," Claude M. Bancroft, New York City; "Mechanics of the Sacrum," Dr. Schwab; "The Upper Right Quadrant," Dr. Wallace; "Appendicular Technic," Arvo Salo, Corning; Technic—"Examining for Short Leg and Management," George J. Schoelles, Bronxville; "Cervical Area," John R. Pike, Albany; "Ribs and Upper Dorsal Area," F. R. Adams, Hornell.

Osteopathic Society of the City of New York

On September 25 Walter B. Underwood, Montclair, N. J., spoke on "Practical Points in Certain Gallbladder Conditions."

The next meeting is scheduled to be held on October 16.

OHIO

Third (Akron) District Osteopathic Society

On September 8 at Orrville, H. J. Samblanet, Canton, spoke on "Simplified Foot Technic."

Fourth (Columbus or Central) Ohio Osteopathic Society

On September 9, R. T. Van Ness, Columbus, spoke on "Infantile Paralysis."

The officers were reported in The Journal for May. Committee chairmen have been appointed as follows: Membership, R. G. Reesman, Lancaster; professional education, W. F. Tieman, Newark; hospitals, H. E. Clybourne, Columbus; censorship, L. C. Scatterday, Worthington; student recruiting, Frank R. Spencer, Columbus; public health and education, L. A. Bumstead, Delaware; industrial and institutional service, Ralph S. Licklider, Columbus; clinics, R. T. VanNess, Columbus; publicity, Frances L. White, Columbus; statistics, E. K. Clark, Marion; convention program and arrangements, Alice Bauer, Delaware; legislation, J. O. Watson, Columbus; professional development, J. E. Bolmer, Chillicothe; displays at fairs, M. F. Hulett, Columbus.

Fifth (Dayton) District Osteopathic Society

On September 15 H. F. Garfield, Danville, spoke on "Diagnosis and Treatment of Hypothyroidism."

Sixth (Cincinnati) Society of Osteopathic Physicians and Surgeons

On August 5 a meeting was called for the purpose of organizing the convention executive committee for 1938.

Seventh (Marietta) District Osteopathic Society

The following are the present officers and committee chairmen: President, W. Paul Roberts, Zanesville; vice president and professional development, W. A. Larrick, Cambridge; secretary-treasurer, W. W. Slater, Zanesville; membership, L. H. Schreck, Cambridge; professional education, Harry L. Ritz, Barnesville; hospitals and convention arrangements, L. M. Bell, Marietta; censorship and legislation, L. F. Licklider, Zanesville; student recruiting, Hazel C. Lyne, Zanesville; public health and education, M. D. Worley, Athens; industrial and institutional service, L. E. Butts, Nelsonville; clinics and convention program, H. L. Benedict, Marietta; publicity, H. M. Rothman, New Lexington; statistics, George O. Smith, Marietta; displays at fairs and expositions, J. E. Wiemers, Marietta.

OKLAHOMA

Kay County Osteopathic Association

The first fall meeting of the year was held at Blackwell, September 9. P. W. Gibson, Winfield, Kans., reported on the national convention, and D. W. Streitenberger, Ponca City, spoke on "Acute Anterior Poliomyelitis."

Tulsa District Osteopathic Association

At Tulsa, September 9, Howard C. Baldwin and A. G. Reed, both of Tulsa, spoke on the national convention and other phases of A.O.A. work. The following committee chairmen have been appointed: Hospital and clinics, Howard C. Baldwin; program, F. R. Halladay; legislation, C. P. Harth; student recruiting, A. V. Fish; membership and publicity, Robert D. McCullough; public health and education, A. G. Reed; state relations and industrial and institutional service, C. Denton Heasley; censorship, Louis M. Shea; statistics, Paul F. Benien, all of Tulsa.

PENNSYLVANIA

State Association

The annual convention of the Pennsylvania Osteopathic Association will be held at Erie, October 8 and 9. The following program will be presented:

October 8—Demonstration clinics, ear, nose and throat, L. R. Rench, Cleveland, and C. M. LaRue, Columbus; proctology, Myron B. Barstow, Boston; osteopathic technic, E. H. Cosner, Dayton, Ohio; addresses, "Cardiac Examination and Diagnosis," Ralph L. Fischer, Philadelphia, also A. D. Becker, Des Moines, and Dr. Cosner.

October 9—Demonstration clinics. Addresses by W. M. Pearson, Kirksville, Mo., R. C. McCaughan, Chicago, executive secretary of the A.O.A., Dr. Fischer and Paul T. Lloyd, Philadelphia.

Lehigh Valley Osteopathic Association

On September 8 E. G. Drew, Philadelphia, spoke on "Surgical Indications in Chronic Pelvic Disease."

SOUTH DAKOTA

State Association

The officers were reported in THE JOURNAL for July. The following committee chairmen have been appointed: Membership, W. G. Rosencrans, Vermillion; professional education, L. F. Bartels, Faith; hospitals, George R. Caldwell, Webster; censorship, C. Rebekka Strom, Sioux Falls; public health and education, M. W. Myers, Parker; industrial and institutional service, L. S. Betts, Huron; clinics, Charles E. Schoolcraft, Watertown, and P. W. Wasner, Deadwood; publicity, J. G. Follett, Watertown; legislation, J. H. Cheney, Sioux Falls, and C. S. Betts, Huron; student recruiting, J. G. Betts, Spearfish.

TENNESSEE

West Tennessee Osteopathic Association

At Trenton, September 12, a round table discussion on professional problems was conducted.

The November meeting will be held at Covington.

TEXAS

Dallas County Osteopathic Association

At Dallas, September 9, John M. Peterson, Marfa, spoke on "The Country Doctor."

The October meeting is scheduled to be held on the 14th.

The following are the present officers and committee chairmen: President, Sam F. Sparks; vice president, M. E. Sutphin; secretary-treasurer, Gladys F. Petitt, reelected; program, Bertram W. Culp; publicity, Frank B. Moon; education, V. C. Bassett; legislation, J. S. Whitehead; public health, Michael A. Schalck; clinics, H. H. Gerardy, all of Dallas.

UTAH

State Association

The officers were reported in THE JOURNAL for August. The following committee chairmen have been appointed: Membership, D. D. Boyer, Provo; professional education and development, V. B. Callison, Salt Lake City; censorship, Florence S. Morrison, Ogden; student recruiting, Alice E. Houghton, Salt Lake City; industrial and institutional service, Dr. Morrison and Otto L. Anderson, Richfield; publicity and statistics, Pearl U. Nelson, Salt Lake Ctiy; legislation, Maud P. Callison, Salt Lake City.

VERMONT

State Association

The annual convention of the Vermont Osteopathic Association will be held October 6 and 7 at Bennington. The following program will be presented: "Osteopathic Management of Foot Disorders," "Orthopedics," and "Short Leg Technic," George S. Rothmeyer, Philadelphia; "Gastrointestinal Problems," Wallace P. Muir, Boston.

WASHINGTON

Pierce County Osteopathic Society

At the September meeting H. V. Hoover, Tacoma, demonstrated technic for the correction of ligamentous strain about the hip joint and C. B. Utterback, Tacoma, spoke on the work of the Committee on Public and Professional Welfare.

WISCONSIN

State Society

The officers were reported in THE JOURNAL for June. The following committee chairmen have been appointed: Membership, Helen M. Calmes, Appleton; professional education and development, John B. Baldi, Milwaukee; hospitals, James A. Logan, Milwaukee; censorship, E. C. Murphy, Eau Claire; student recruiting, Richard B. Gordon, Madison; public health and education, Orrin E. Meyers, Horicon; industrial and institutional service, J. J. McCormack, Sheboygan; clinics, Paul Atterberry, Milwaukee; publicity, James C. McCord, Milwaukee; statistics, K. W. Shipman, Evansville; convention program, M. G. Ellinger, Milwaukee; convention arrangements, Frank Olds, Milwaukee; legislation, L. B. Harned, Madison (temporary).

Milwaukee County Society of Osteopathic Medicine

The following meetings were held:

August 13—"Foot Function," a representative of the Musebeck Shoe Company.

August 20—"Highlights Gleaned from the Denver Polyclinic and Postgraduate Course," H. R. Bullis, Milwaukee.

September 3—"Experiences Among Mountain Folk of West Virginia," Edmond B. King, Shirley, Tenn.

WYOMING

A meeting was scheduled to be held at Casper, September 18 and 19, to form a divisional organization.

Special and Specialty Groups

Middle Atlantic States Osteopathic Association

The annual convention of the Middle Atlantic States Osteopathic Association was held September 25 and 26 at the Hamilton Hotel, Washington, D. C., too late to be reported in this number of THE JOURNAL.

New England Osteopathic Association

The annual fall meeting of the New England Osteopathic Association was held September 24 and 25 at Hotel Emerson, York Harbor, Maine, too late to be reported in this number of THE JOURNAL.

Southwestern Internists Conference

The annual conference is to be held at the Adolphus Hotel, Dallas, Tex., October 14 and 15. The following program is to be presented: "Scientific Medicine—Osteopathy," "Value of Careful Diagnosis," and "The Surgical Abdomen," O. O. Bashline, Grove City, Pa.; "The Obstructive Lesion and Its Results," "Silent Renal Pathology," "Recent Advances in Urology," and "Urological Diagnostic Procedures," H. Willard Sterrett, Philadelphia; "Diagnostic Value of Backache," "Irregularities of the Heart Beat," "Differential Diagnosis of Enlargement of Cervical Lymph Glands," and "Physiological Pathology of Endocrine Glands," Lonnie L. Facto, Des Moines. Other speakers will be John E. Halladay, Tulsa, Okla., and L. V. Cradit, Amarillo, Tex.

CHANGES OF ADDRESS AND NEW LOCATIONS

Adams, E. H., PCO '37; 33 Deerfield Ave., Hartford, Conn.

Ambler, Samuel J., from Abington, Pa., to 216 E. Fourth St., Elyria Ohio.

Anderson, Clifford F., from Muskegon Heights, Mich., to Orr Bldg., Manistique, Mich.

Appleyard, Douglas, from Tadworth, Surrey, England, to 294 Bath St., Glasgow, Scotland.

Austin, I. M., from Morgantown, Wis., to 501-02 Second Natl. Bank Bldg., Uniontown, Pa.

Axtell, Eudora, from Berkeley, Calif., to 250 S. Harvard Blvd., Los Angeles, Calif.

Barnes, F. Allen, from Butte, Mont., to Missoula, Mont.

Barrett, Wesley M., Jr., from Beverly Hills, Calif., to 5514 Wilshire Blvd., Los Angeles, Calif.

Barry, Lester D. E., from Wahoo, Nebr., to 1308 Eighth Ave., Belle Plaine, Iowa.

Bates, Charles A., from 5250 Ellis Ave., to 5555 Sheridan Road, Chicago, Ill.

Becker, Alan R., DMS '37; Southwestern Osteopathic Sanitarium, 3244 E. Douglas Ave., Wichita, Kans.

Bennett, Robin E., from Washington, D. C., to 3012 N. Fifth St., Harrisburg, Pa.

Black, Coit A., KCOS '37; Suite 2 over F. W. Woolworth & Co., Defiance, Ohio.

Blasingame, Wilbur B., KCOS '37; 948 Custer Drive, Toledo, Ohio.

Boals, Frank M., from Villa Grove, Ill., to 413 Henry St., Alton, Ill.

Bray, John G., from Kirksville, Mo., to 203 First Natl. Bank Bldg., Delta, Colo.

Bretts, P. S., PCO '37; 523 E. Lincoln Highway, Coatesville, Pa.

Brodkin, Mitchell, from 5419 N. Fifth St. to 1453 W. Chew St., Philadelphia, Pa.

Brown, Charles M., from 1412 12th Ave., to 1322 12th Ave., Altoona, Pa.

Browning, C. M., from Louisiana, Mo., to Memphis, Mo.

Buckman, P. E., COPS '37; Monte Sano Hospital, 2834 Glendale Blvd., Los Angeles, Calif.

Buchacker, F. LeRoy, from Galesburg, Ill., to North Main St., Marseilles, Ill.

Buffum, G. H., from Lotus Theatre Bldg., to 6-8 D. & G. Bldg., 47 N. Main St., Sheridan, Wyo.

Button, John C., from Macon, Mo., to 51 Mountain Ave., Maplewood, N. J.

Carter, Hal K., from Salem, Mo., to 114 N. Monroe, Streator, Ill.

Casey, Addie R. Brais, from 3632 Lafayette Ave., to 1839 S. Spring, St. Louis, Mo.

Chippendale, Thomas J., from Springfield, Vt., to Box 171, Poultney, Vt.

Clark, V. G., from 313 Hawaiian Trust Bldg., to 513 Hawaiian Trust Bldg., Honolulu, T. H.

Cooke, Emblen N., from Seattle, Wash., to 422 W. Central Ave., La Habra, Calif.

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Davies, David, COPS '37; 641 N. Beachwood Drive, Los Angeles, Calif.

Doddridge, Frank E., from 625 E. Monroe St., to 314 Odd Fellows Bldg., South Bend, Ind.

Doron, Charles B., from 44 Exchange Bldg., to 47 Broadway, Bangor, Maine.

Dresser, Harold E., from Des Moines, Iowa, to 805 12th St., Belle Plaine, Iowa.

Drost, James M., from North Platte, Nebr., to P. O. Bldg., Holyoke, Colo.

Eiselt, Robert O., KCOS '37; Flandreau, S. Dak.

Ennis, John C., from 106-07 First Natl. Bank Bldg., to 204 State Bank Bldg., Parsons, Kans.

Fish, J. Mancil, from 209 Pythian Bldg., to 218-19 Pythian Bldg., Fifth at Boulder, Tulsa, Okla.

Fleming, Thomas A., PCO '37; 24 Polhemus Place, Brooklyn, N. Y.

Funk, Francis M., from 321½ Johnstone St., to 209 Union Natl. Bank Bldg., Bartlesville, Okla.

Garner, Juno N., from Westmoreland, Calif., to Fallbrook, Calif.

Garrett, C. C., from 2328¼ Johnston St., to 713 Transamerican Bldg., 649 S. Olive., Los Angeles, Calif.

Gildersleeve, Alfred R., from Brooklyn, N. Y., to 23 Old Mamaroneck Road, White Plaines, N. Y.

(Continued on page 22)

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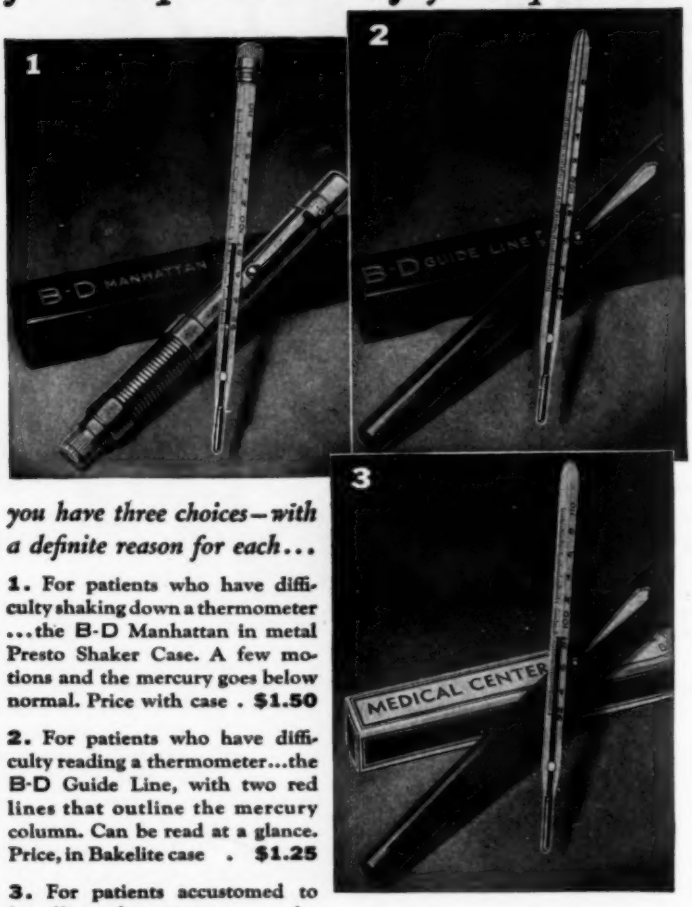

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Glanzer, Andrew S., from Bridgewater, S. Dak., to Menno, S. Dak.

Gnau, Charles U., DMS '37; Pythian Bldg., Fort Myers, Fla.

Goldner, J. Henry, Jr., from Grove City, Pa., to 6075 Franklin Ave., Hollywood, Los Angeles, Calif.

Grant, Jack H., CCO '37; 5250 Ellis Ave., Chicago, Ill.

Greenberg, William B., from 2223 Griffin Ave., to Los Angeles County Osteopathic Hospital, 1100 N. Mission Road, Los Angeles, Calif.

Gulden, H. L., from 318½ Main St., to 215½ Main St., Ames, Iowa.

Haines, Herbert W., PCO '37; Osteopathic Hospital of Philadelphia, Philadelphia, Pa.

Hardin, Ella, from 111 Corcoran St. Bldg., to Depositors Natl. Bank Bldg., Durham, N. Car.

Hoffman, Alfred L., PCO '37; 196 N. 18th St., East Orange, N. J.

Holloway, James L., from Winslow, Ark., to 3817 Gillon Ave., Dallas, Texas (Winter address).

Hooper, C. R., from Rawlins, Wyo., to 5 Maxwell Bldg., Steamboat Springs, Colo.

Hormavirta, Hilkka, from Montclair, N. J., to 126 Peter St., Toronto, Ont., Canada.

Houghton, Richard B., KCOS '37, Seabreeze Station, Daytona Beach, Fla.

Hovey, Arnold Lee, from Boston, Mass., to 29 Bellevue Ave., Melrose, Mass.

Howard, Frank M., COPS '37, 801 N. Los Palmas, Hollywood, Los Angeles, Calif.

Humphreys, Marshall E., KCOS '37, Tuscumbia, Mo.

Inwood, Garfield, from Chicago, Ill., Vermontville, Mich.

Jennings, Charles H., from Bay View, Mich., to 157 Third St., N., St. Petersburg, Fla. (Winter address).

Johnson, J. Sydney, from 500 Bryant Bldg., to 1623 W. Ninth St., Kansas City, Mo.

Kieft, Clarice, DMS '37, R. R. No. 2, Muskegon, Mich.

Kierstead, William B., from Providence, R. I., to 23 N. Main St., Statesboro, Ga.

Larmoyeux, Louis J., KCOS '37; 309 St. James Bldg., Jacksonville, Fla.

Lee, William F., from Los Angeles, Calif., to 414 E. Seventh St., Hanford, Calif.

Linhart, Ernest W., from 519 Beans Bldg., to 333 N. Fifth St., San Jose, Calif.

Litton, H. E., from Kirksville, Mo., to 509 E. Chestnut St., Glendale, Calif.

Logan, Douglas, from 420 S. Olympia, to 410 Ritz Bldg., Tulsa, Okla.

Lomax, William B., KCOS '37, Montrose Colo.

Lycan, John P., from 1101 South Boulevard, to 1100 North Boulevard, Oak Park, Ill.

MacDonald, John A., from 160 Newberry St., to 173 Bay State Road, Boston, Mass.

McCullough, Ray R., from 216 N. Hanover St., to 53 W. Prospect St., Carlisle, Pa.

McDowell, Robert H., from Oklahoma City, Okla., to Harbor Beach, Mich.
McErlain, George F., from Hebron, N. Dak., to Greengard Bldg., Mandan, N. Dak.
McLean, Theodore R., KCOS '37, 311 Oakland Beach Ave., Rye, N. Y.
McLeod, James D., from Jefferson City, Mo., to Box 385, Salem, Mo.
Miller, Waldo B., from Winterport, Maine, to 81 Washington St., Camden, Maine.
Moeschlin, George J., from 327 Cumberland St., to 335 Cumberland St., Lebanon, Pa.
Morresy, John C., PCO '37, 503 Broadway, Long Branch, N. J.
Morrow, H. G., from Cheboygan, Mich., to 203 Adams Bldg., Sault Ste. Marie, Mich.
Moseley, James R., from Bay View, Mich., to Lew Bldg., St. Augustine, Fla. (Winter address).
Mulhollan, Warren B., from Buffalo, N. Y., to Drexel Court Apts., Box 117, Drexel Hill, Pa.
Naylor, Stephen G., from J. C. Penney Bldg., to 323 Broadway, Hanover, Pa.
Neal, George C., from 71 S. St. Clair St., to 228 S. State St., Painesville, Ohio.
Nelson, Ellen S. C., from Memphis, Tenn., to 900 Sherman Ave., Plainfield, N. J.
Nelson, Elmer O., from Midland, Texas., to Seminole, Texas.
Odey, William M., from Kewanee, Ill., to 702 Anderson Bank Bldg., Anderson, Ind.
Painter, John G., from 1735 Vistillas Road, to 2286 N. Lake Ave., Altadena, Calif.
Pickrell, Lewis C., KCOS '37, The American Natl. Bank Bldg., Baxter Springs, Kans.
Pike, Arthur P., from 301 Kress Bldg., to 330 Pine Ave., Long Beach, Calif.
Pinkston, Paul E., from Aransas Pass, Texas, to 1602 Richmond Road, Houston, Texas.
Randel, Edward A., COPS '37, 363 Museum Drive, Los Angeles, Calif.
Roberts, John B., from Joplin, Mo., to Box 294, Seneca, Mo.
Robinson, G. L., from Herndon, Kans., to 228 N. Penn, Oberlin, Kans.
Rossman, Glenn O., from Detroit, Mich., to 698 Congress St., Portland, Maine.
Russell, Kenneth, from Jonesport, Maine, to Gray, Maine.
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Scott, Norla, from Box 534, to Box 537, Coldwater, Kans.

Shaffer, Frank W., from Public Utilities Bldg., to 141½ S. Santa Fe, Salina, Kans.

Shaft, Robert C., from 1302 First Natl. Bank Bldg., to 528 E. Main St., Lexington, Ky.

Sharkey, Paul, from Hoboken, N. J., to 187 Ames St., Brocton, Mass.

Simpson, Donald H., from Phoenix, Ariz., to P. O. Box 82, Springerville, Ariz.

Slater, Weldon W., from 326 Richards Bldg., to Apt. 1, 41 S. Fourth, Zanesville, Ohio.

Smidderks, W. L., LA '37, Monte Sano Hospital, 2834 Glendale Blvd., Los Angeles, Calif.

Smith, Edward S., PCO '37, 38 Colton Ave., Sayville, L. I., N. Y.

Smith, Furman J., from 6408 Harvard Ave., to 6402 Harvard Ave., Chicago, Ill.

Stretch, Olive M., from Glendale, Calif., to 414 Edison Bldg., 317 W. Main St., Alhambra, Calif.

Swisher, H. W., Jr., KCOS '37, 2020 McGowen Ave., Houston, Texas.

Thomas, Robert L., KCOS '37, 1340 W. Third Ave., Columbus, Ohio.

Thompson, Homer M., KCOS '37, Sparta, Mo.

Thompson, Jerry R., KCOS '37, Sparta, Mo.

Thompson, J. R., from 423 Stevens Bldg., to 1007-08 Industrial Bank Bldg., Washington Blvd., at Grand River, Detroit, Mich.

Thompson, Nora L., from 114 Main St. to 14 Jackson St., Littleton, N. H.

Thorpe, Milton P., from Kelowna, B. C., Canada, to 727 Birks Bldg., Vancouver, B. C., Canada.

Tolle, M. Evelyn, COPS '37, 10955 Weyburn Ave., Westwood Village, Los Angeles, Calif.

Van Meter, I. M., from "Mountfield," 33 Grove Hill Road, to 1 Clanricarde Gardens, Tunbridge Wells, Kent, England.

Vogler, Charles W., KC '37, c/o C. E. Farrington, Fort Lauderdale, Fla.

Wakelin, Walter, COPS '37, Osteopathic Clinical Group, 317 S. Hill St., Los Angeles, Calif.

Walker, Henry B., from Eagleville, Mo., to 286 Union St., New Bedford, Mass.

Webb, Henry D., from Tifton, Ga., to 208-10 Doctors' Bldg., Columbus, Ga.

West, William B., from East Aurora, N. Y., to 216 Westchester Ave., Port Chester, N. Y.

White, Edwin C., from 552 N. Park Ave., to 350 N. Park Ave., Warren, Ohio.

Wilson, C. Homer, from 1027-28 Esperson Bldg., to 1023 Esperson Bldg., Houston, Texas.

Wilson, Verne J., from Denver, Colo., to 504 Teachout Bldg., Des Moines, Iowa.

Withers, E. F., from 3 N. First St., to 201 Franklin St., Denton, Md.

Wolf, A. Hollis, from Kirksville, Mo., to Palisades Natl. Bank Bldg., Palisades, Colo.

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King, Wallin W., 542 S. Broadway, Los Angeles.
Richmond, Cordelia M., 1204 N. Park Ave., Pomona.

Colorado

Atterberry, R. L., Box 746, Canon City.
Willbanks, Norman B., Rocky Ford.

Idaho

Catron, H. B. (Renewal), Payette.

Iowa

Rogers, Kingsley R. (Renewal), 403 N. Second St., Clear Lake.

Kansas

Hewlett, E. W. (Renewal), Russell.
Gibson, Richard G., KCOS '37 (June), 406 State Bank Bldg., Winfield.

Michigan

Wilson, Ralph A. (Renewal), 162 W. Maple Ave., Birmingham.
Wolfe, Frank B., Still Osteopathic Hospital, 931 Detroit St., Flint.
Strauss, Donald G., 518 Pontiac Bank Bldg., Pontiac.

Missouri

Landfather, W. L. (Renewal), Edina.
Neal, Bentley, KCOS '37 (June), Grant City.
Schuetz, Hugh A., Hurdland.
Eisenhart, W. E. (Renewal), 500 Shukert Bldg., Kansas City.
Fairfield, Cora E. (Renewal), 3908 Baltimore, Kansas City.
Lobb, J. K. (Renewal), 1121 Main St., Lexington.
Reiff, H. Maude (Renewal), 656 S. Ellsworth Ave., Marshall.
McLeod, James D. (Renewal), Box 385, Salem.

New Jersey

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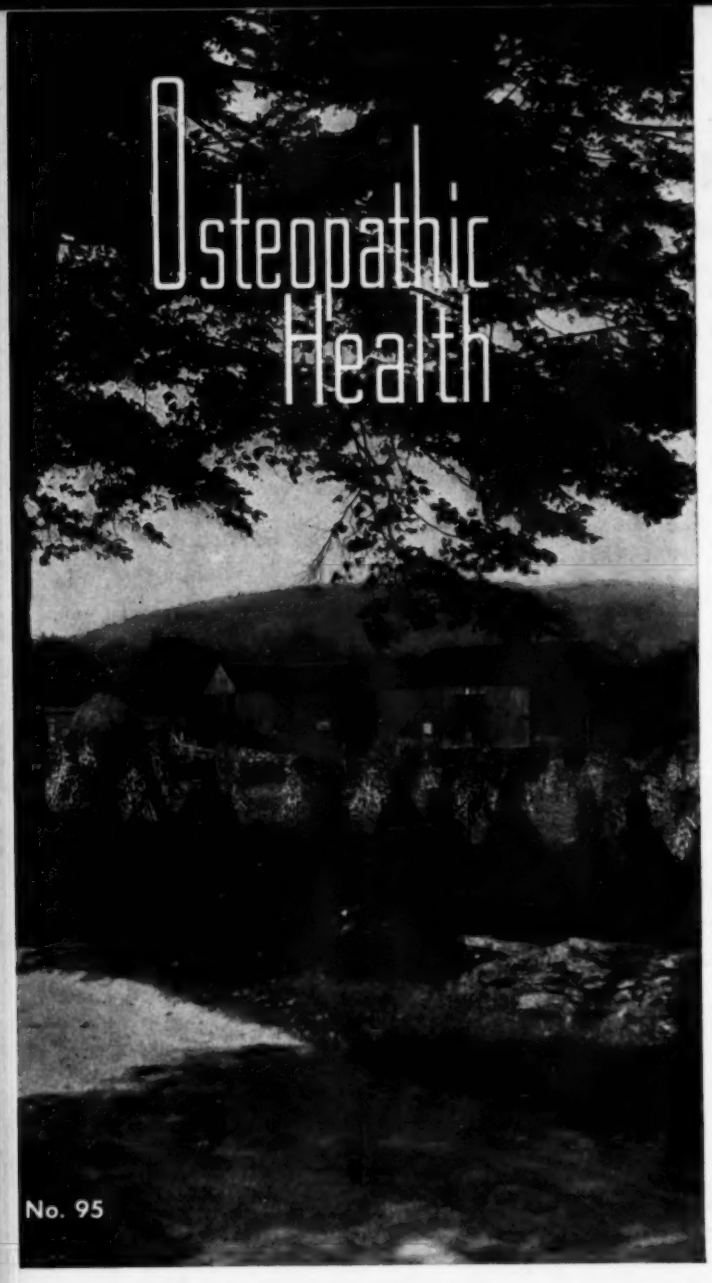

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Some of the November Osteopathic Magazine Titles

PERHAPS YOU'RE WEARING AN 1890 HAT. By Arthur D. Becker, D.O.

An attempt to correct the common impression among laymen that all osteopathic physicians are family doctors. The individual specialties are touched upon as well as the specialist organizations and standards in the profession.

WHAT ARE YOUR WORK HABITS DOING TO YOU? By Louis H. Logan, D.O.

An article showing how physician and patient must cooperate in correcting osteopathic lesions which may arise from habitually faulty posture necessitated by various types of work.

THE HOUSE OF A THOUSAND SHADOWS. By John C. Button, Jr., D.O.

Showing how new light was brought to the treatment of nervous and mental diseases by the teachings of A. T. Still, and how such cases are handled in a modern osteopathic institution.

LISTENING POST IN THE ROCKIES. By Inez M. Robinson.

A human interest story about some of the services and patients of the clinic of the Rocky Mountain Osteopathic Hospital.

LET US BE THANKFUL. By Edward A. Hyett.

A beautifully worded Thanksgiving tribute appropriate to the season of the year.

SHOES AS BASE PLANES. By Charles A. Roberts.

An adaptation of a paper read at the national convention in Chicago by the man who developed the Posturchek and who discusses the functions which a correctly designed and made shoe should correct.

Osteopathic Equation

$$\frac{\text{P. P.}}{\text{C. P.}} + \frac{\text{O. M.}}{\text{O. H.}} = \frac{\text{I. P.}}{\text{E. C.}}$$

What does it mean?
See explanation below.

Osteopathic Health No. 95

INFANTILE PARALYSIS
By Ray G. Hulburt, D.O.

A carefully written article on a condition which has reached almost epidemic form this year in some parts of the United States and Canada.

It tells your patients how gentle osteopathy is in the acute stages, and how necessary it is in the chronic stages should paralysis set in.

Combat unfavorable publicity by sending out this little booklet to your friends and patients.

HEALTH THROUGH OSTEOPATHY
By Walter E. Bailey, D.O.

This is taken from an address given recently before the Rotary Club. It portrays osteopathy as the most modern science of healing today. It is both entertaining and informative.

CONQUERING FATIGUE
By R. E. Duffell, D.O.

How to overcome that tired feeling, how to accomplish more work, and how to enjoy life more are some of the questions answered in this short breezy article.

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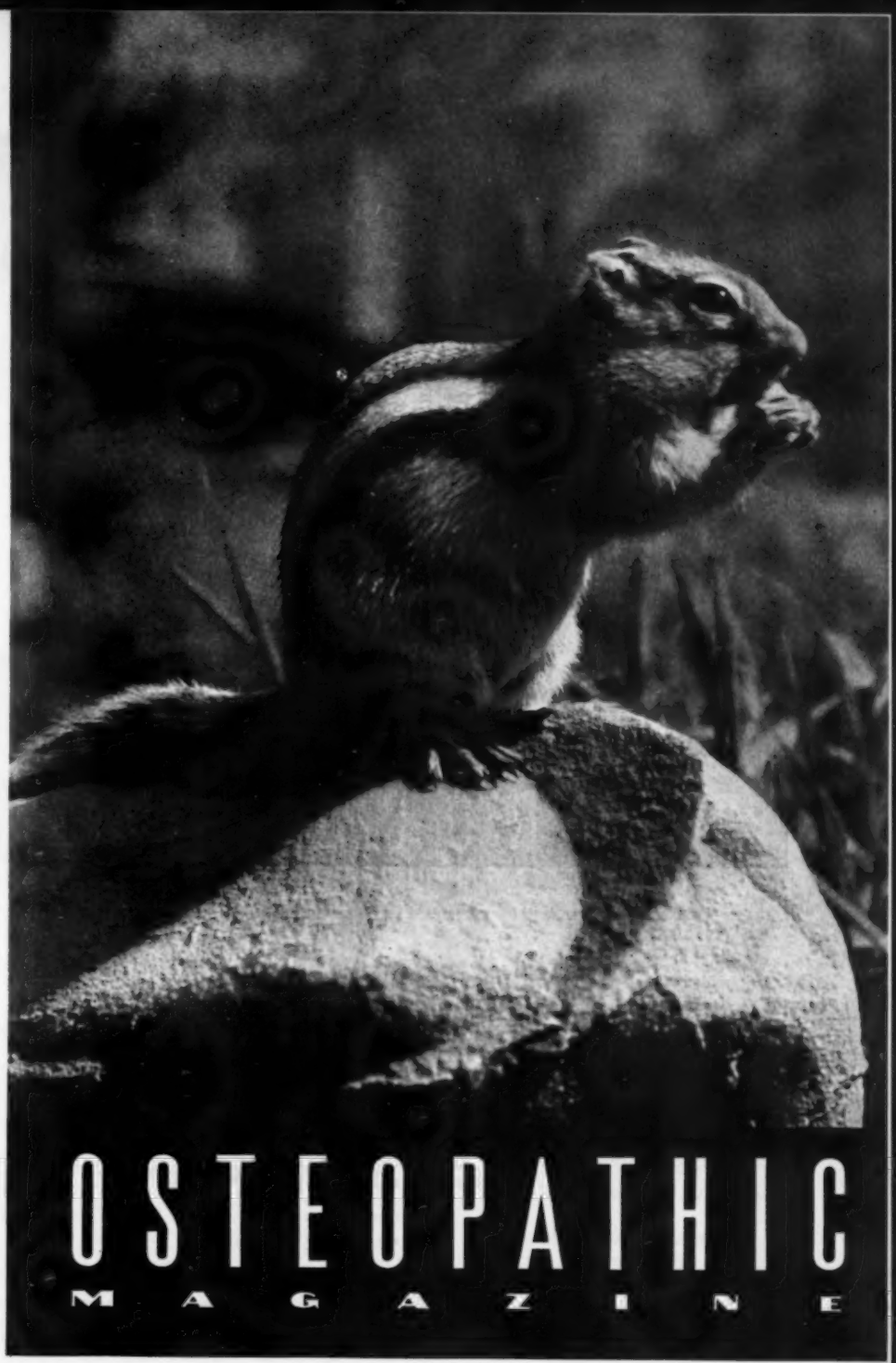

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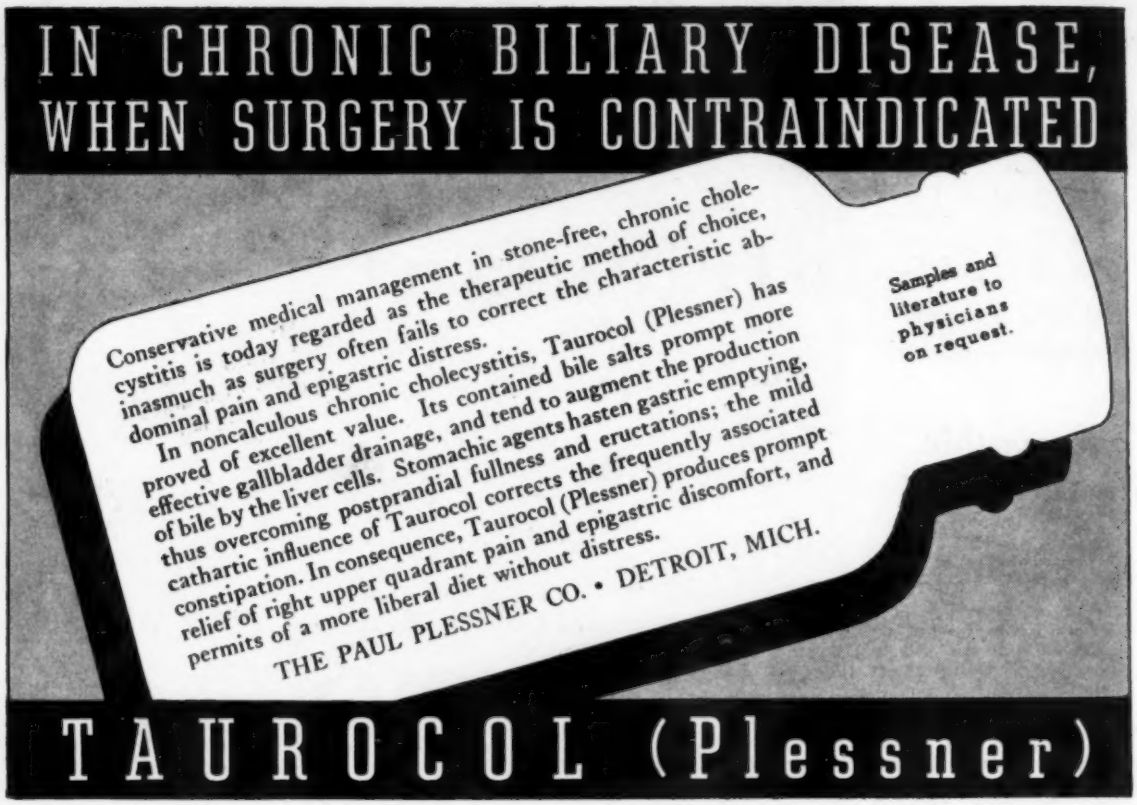
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